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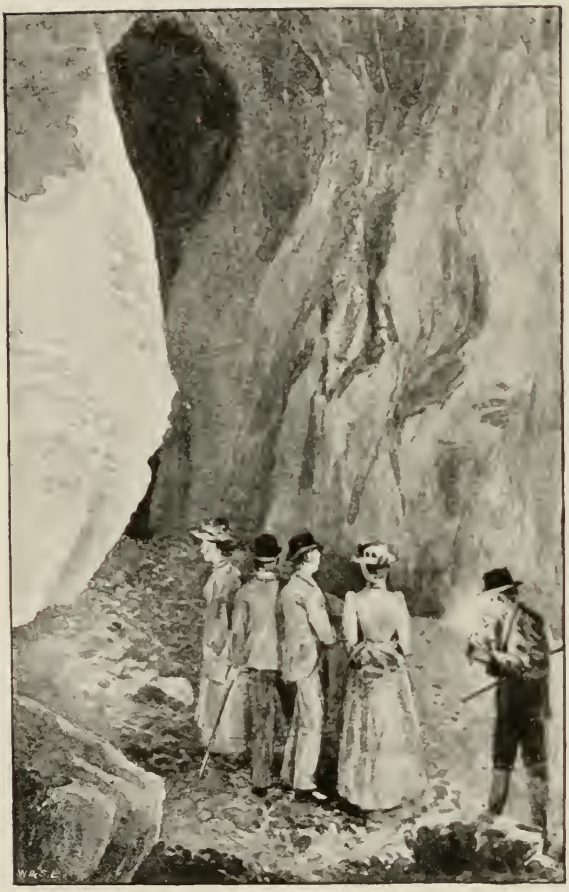
PAGAN IRELAND

'If any there be which are desirous to be strangers in their owne soile, and forrainers in their owne Citie, they may so continue, and therein flatter themselves. For such like I have not written these lines nor taken these paines.'—Camden.



ANCIENT TROGLODYTE RETREAT.

A passage in the Great Cave of Gleniff, Co. Sligo (see p. 5). From a photograph taken by Magnesium light.

PAGAN IRELAND

AN ARCHÆOLOGICAL SKETCH

A Handbook of Irish Pre-Christian Antiquities

BY

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AUTHOR OF

The Lake-Dwellings of Ireland
The Rude Stone Monuments of Ireland (Co. Sligo, &c.)
History of Sligo, County and Town
&c., &c.

With Numerous Illustrations

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PREFACE.

PREHISTORIC ARCHÆOLOGY has been defined as 'the history of men, and things which have no history.' It has forced the hitherto silent past to speak, and we have now indisputable evidence that, in Ireland, man has lived through great changes of climate, and has seen many races of animals disappear from before him—the mammoth, probably; the elk, reindeer, bear, and wolf, certainly.

The earliest records of primitive man were, until a comparatively recent period, passed over unnoticed, although a mass of such evidence proves that a Stone Age prevailed at one time, not in Ireland alone, but in almost every district of the inhabited world. This is confirmed by the analogous forms of flint implements, and also the identity of ornamentation, designed by races widely separated. The

earliest implements are found in the gravel-drift, and are of the rudest manufacture; but from them can be traced a continuous improvement and development in shape and manufacture, until they give place to the more highly-finished weapons of bronze. By a comparison of Irish waifs of antiquity with kindred objects in other countries throughout the globe, conjectures can be formed as to the social state of this country during the pre-Christian period.

The descriptions which follow, of ancient remains traceable to Pagan times, are derived from the accounts of various explorations and surveys made, in each branch, by competent archæologists, and are here reproduced — in many instances in the very words of the writers. The Bibliography at the end of the volume comprises a list of upwards of one thousand papers and works, by about three hundred different authors. An idea may be thus conveyed of the vast scaffolding erected for the building of a comprehensive guide to pre-Christian archæology. In such a plethora of literature the principal difficulty lay in selecting the best and most suitable material for the purpose.

With regard to the quotations of national folk-lore, as elucidating the salient features of the ancient religions, there is little doubt that

pre-Christian ideas still colour the beliefs of the lower strata of the population, especially in the South and West. Paganism there still holds sway in the imagination of the peasantry in remote districts, but slightly veiled in its Christianised form, retaining thus many primeval doctrines, and, strange to narrate, these beliefs, wild legends, and mythology, when reduced to writing, have been given as veritable history by many writers.

It is hoped that this short sketch of Pagan Ireland may be acceptable to the general reader, who, as a rule, dislikes minute technicalities. To treat the subject exhaustively, every chapter would expand into a volume; and, although the reader might, perhaps, gain more insight into minute details of the past, yet it is questionable if he would, after perusal, obtain any clearer general insight into the life of the remote past. This work may also give an impetus to future researches and investigations. Fresh facts, in the archæological field, accumulate but slowly; the world is too busy to devote much thought to the things of the past, so it behoves us to note them as soon as they appear. Information with regard to any new discovery, the titles of books, or papers, bearing on Irish pre-Christian archæology uncatalogued

in the Bibliography at the end of this volume, or any reference to Pagan times, will be thankfully received by the writer. Minor details may be subjected to modification, but it is trusted that a sufficient number of well-authenticated facts have been accumulated to make the general deductions tolerably firm.

For the varied subjects passed in review numerous illustrations have been drawn, and many, already in existence, have also been utilized. To the Council of the Royal Irish Academy the writer is indebted for the use of 155 illustrations, principally from the Catalogue of Antiquities of their Museum; the Council of the Royal Society of Antiquaries of Ireland lent about 40 engravings, and but for the facilities thus afforded it would have been extremely difficult to produce a work on Irish archæology. The writer takes this opportunity of expressing his indebtedness to the Councils of these two Societies. The Society of Antiquaries of Scotland granted the use of ten plates illustrative of the sculpturings in the chambers of the Loughcrew group of carns; twenty engravings of stone moulds and of ornamentation on bronze were given by the well-known antiquary, Sir John Evans. Figures 51, 52, and 53 are the property of the Anthropological Society, and

were previously lent for *The Lake-Dwellings of Ireland*. The map at the end of the volume is reproduced by permission of the Society of Antiquaries of London. Other illustrations are acknowledged in the text. It may be well to add that the attempted restorations of the Irish elk and reindeer (figs. 1 and 2) are probably not very true to nature.

CLEVERAGH, SLIGO,
July, 1895.

NOTE.—Page 111, line 18. *White and coloured Pebbles found with Pagan Interments.*—In the present day, if a person in the Orkney or Shetland Isles is supposed to have been affected by the 'Evil Eye,' he is cured by having administered to him water, both externally and internally, into which has been dropped some charms supposed to possess magical power. As a rule these are pebbles of different colours gathered from the seashore. The charm is considered most potent when one stone is black, another white, the remainder being red, blue, or of greenish tint. This clue is explanatory of the deposition of pebbles of various colours in ancient pagan graves.

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CHAPTER I.

ANCIENT FAUNA AND PRIMITIVE MAN.

A SKETCH of the religion, manners, customs, ornaments, and monuments of the Pagan Irish opens up an immense field of research. Paganism existed in the land for untold centuries, not only before the introduction of Christianity by the early missionaries, but, it is believed, long after the period when the religion of Christ became the acknowledged creed of Ireland. It has left its impress—faint, it is true, but still discernible—in the peculiar beliefs and customs of the peasantry. People in a rude state do not, as a rule, possess the means, nor have they the desire, to hand down a minute account of society such as is contained in Irish manuscripts, none of which date from an earlier period than that of the firm establishment of the New Faith. The religion, manners, and customs of the ancient inhabitants of the land, are herein treated from traditional folk-lore and classic authority; it would be of little utility to give even a synopsis of the various legends related of the peopling of Ireland before the flood. In most descriptions of the territories occupied by the elder arrivals in the country, the boundaries of the settlements are, as a rule, undefined in the inland regions;

from which it may be inferred that, for a lengthened period, the central portion of Ireland was but sparsely inhabited. The early depredators on the Irish coasts are, in Bardic tales, described as swarming throughout the German Ocean, their headquarters being the Shetland Isles and the Hebrides. This extern force represented many tribes of Northern Europe, and appears to have made itself felt from a very remote period.

The descriptions which here follow of ancient remains traceable to pagan times, are derived from the accounts of various explorations and surveys made in each branch by competent archæologists; and by a comparison of these waifs of antiquity with kindred objects in other countries throughout the globe, conjectures can be formed as to the social state of Ireland during the pre-Christian period.

In the earliest ages of man's existence on the earth, weapons and implements were formed of the rudest materials accessible; wood, bone, horn, stone, and flint were employed before he was able to use metal for these purposes. 'The weapon which, when launched by the hand, is not to return to its owner, may easily be of a less valuable material than that which man looks upon as connected with his own person, and thus the arrowhead of flint may have been contemporaneous with the period of iron. The want of value in the material pointed it out for the manufacture of those articles, the use of which implied their loss.'

In collecting implements of flint, an unlooked-for difficulty often occurs, owing to a superstition prevalent amongst the peasantry, many of whom believe that when the flints have been boiled in water, the liquid is a certain cure of, as well as a preservative against, sickness in cattle, and that it restores to health those

that are ailing, or (as they term it) 'elf-shot.' 'I have known cases,' remarks W. J. Knowles, 'where the possessor of a few flint antiquities refused to sell them, as it was found more profitable to lend them out to neighbours for the purpose of curing cattle than sell them at once for a small sum.'

Counterfeit flint 'antiques' are by no means uncommon; the most celebrated forger was undoubtedly the well-known character 'Flint Jack.' Born in the year 1816, of humble parentage, he in after-life went by a hundred *aliases*. The skill he displayed was such that, it is said, he included on his list of dupes the then Curator of the British Museum. Jack, however, never succeeded in discovering the art of surface-chipping, which he declared was a 'barbarous art' that had died with the flint-using folk.

Our public and private collections represent numerous and well-authenticated exhibits of so-called Celtic antiquities; here we have the rude-flint implements used by the earliest arrivals on our shores; then evidences of the metallurgic skill developed at a later period in the fabrication of copper or bronze axes, swords, and various weapons; finally, personal ornaments formed of precious or other metal, which attest the increased skill of the inhabitants. All these represent an unerring exposition of the manners and arts of an early race that spread over Western Europe, and was apparently untouched by classic civilization. From these authentic materials may be reared a more reliable history of the past, than from all the bardic legends which describe the primeval occupation of Ireland.

The interest manifested during recent years in the prosecution of antiquarian research is very remarkable.

Towards the close of the last and commencement of the present century, studies of this nature were confined to a very limited circle. The records, however, which have been handed down to us are increasing in scientific estimation, and we begin to value the importance of these labours. Every attempt to depict the social and mental condition of Early Man must necessarily be largely conjectural, but great benefits have been conferred by the investigations of the old school of antiquarians; for, although their deductions may have been fallacious, yet the facts which they have recorded are of the greatest importance. The traces left by the former inhabitants of the country resemble the pages of an ancient manuscript: some are easily decipherable, whilst others are very indistinct; however, when read as a whole, enough remains to enable us to form an outline of their manners, customs, and superstitions.

It has been established, on incontrovertible evidence, that worked flints have been discovered, under a considerable depth of undisturbed alluvial gravel, in France and Britain; also that implements of flint and stone have been found in the earthen, or stalagmitic floors of caverns, in conjunction with the bones of animals long extinct in those latitudes—such as the lion, tiger, bear, hyena, rhinoceros, elephant, hippopotamus, mammoth, reindeer, and megaceros.

Now, if the handiwork of man is found associated with the remains of these extinct mammalia, it follows, as a simple induction, that he existed contemporaneously with them; and most probably migrated, as they did, over land which then formed a portion of the European Continent, but which has since been eroded by the sea. This gives point to the theory that a very

primitive race had overspread the Continent of Europe long before the advent of the tribes and mixed peoples that now inhabit it—a race which used as food not only the urus and the bison, but also the mammoth, reindeer, and megaceros—a race which must have at last reached the shores of Ireland, where they may have carved those rude devices (that form an enigma to the antiquary) on the face of natural rocks, or on the walls of caves, who reared the earliest of our rude-stone monuments, and the most primitive of our lake-dwellings.

The fact of the comparative absence of human remains is a problem capable of an easy solution. In early times savage man had probably no more idea of the sanctity which now-a-days surrounds the dead, than had the wild beasts with which he was surrounded; and osseous remains can only be expected to be met with under exceptional circumstances, until the period when the body was placed in a sepulchre, protected overhead—as in the cromleac—from the effects of weather, and by the side-stones, from the ravages of beasts of prey.

The celebrated cavern of Gleniff, in the Co. Sligo, situated high up on the mountain-side, was certainly inhabited in former times. Some rude flint-flakes, and a bronze hatchet—now in the collection belonging to the Royal Irish Academy—were here found in a mass of stalagmite, and under the present floor of the cavern bones of recent animals were dug up by the late E. T. Hardman.

It may however be said that no startling discovery of cave-remains has as yet been made; but the most important inferences drawn by Messrs. Ussher, Adams, and Kinahan, from the facts discovered by them in the

explorations of Ballynamintra Cave, near Dungarvan, are as follows :—

The history of the cave is divided into five distinct periods: during the *first*, the cavern was excavated by aqueous agency; in the *second*, the flow of water ceased, the cave became comparatively dry, was inhabited by bears, and a stalagmite floor was deposited—by infiltration from above — over the gravel which had been washed in by the stream. During the *third* period the stalagmite floor was, from some cause, partially broken up, and in places a pale, sandy earth is intruded, enveloping the broken stalagmite and the animal remains. In the *fourth* period there is an accumulation of earth, and other deposits, and the cave is 'inhabited by men who were contemporaneous with the Irish elk.'

That the deposition of the two upper earthen strata was gradual and successive is clearly shown by the layers, formed one above the other in the grey earth. This is corroborated by the sequence of the animal remains, as well as by the dissimilar colouring of the bones—the megaceros being the characteristic animal of the former stratum, whilst domesticated animals were most plentiful in the latter. These facts show that the human remains, implements, and charcoal-bed, found with the remains of megaceros, were deposited there contemporaneously with them. The charcoal and calcareous seams mark successive floors during the slow accumulation of a refuse-heap, when man was the chief occupant of the cave. The condition of the larger bones — especially those of the megaceros — is an additional proof of the human occupation of the cave at a time when those animals lived; and the chipped hammer-stones found in the same stratum were, in all

probability, the very implements with which the bones were broken and split along their length. How the fragments of human bones were mixed with the stone implements and animal remains the explorers did not venture to explain.

In the *fifth* period of the history of the cave, its inhabitants used carved bone implements and polished stone hatchets. The megaceros and bear disappear, giving place to domesticated animals.*

The caves of Knockmore, Co. Fermanagh, were explored by Mr. Thomas Plunkett, who has given a long enumeration of the mammalia and other relics found in them. Some authorities believe that the remains are quite recent. With regard to these deposits Mr. Plunkett, however, is of opinion that 'there is strong evidence pointing to the presence or operation of ice in this region since these remains were deposited.' If Mr. Plunkett is correct, it would appear that the *Luscans*, or cave-dwellers of Fermanagh, were a race somewhat similar to the Lapps of the present day, who lived portions of the year in places that at other seasons were enveloped in snow and ice.†

'For at one time,' remarks Sir Robert Ball, 'from its normal home at the poles the great glaciation has spread southwards; a sheet of ice and snow, hundreds or thousands of feet thick, has crept from the highlands of Norway and Sweden, has invaded Central Europe as far as Saxony, while the greater part of Great Britain was also submerged by an icy covering. . . . We live at present in a zoologically impoverished age, from which many of the largest and the finest animals, such

* *Proceedings, Royal Irish Academy*, vol. ii. (ser. ii.), pp. 77, 78.
† *Geology of Ireland*, p. 285. G. H. Kinahan.

as the mammoths and sabre-tooth tigers, have but recently vanished. We should, however, be probably correct in asserting that all the animals now inhabiting this globe—man himself not excepted—survived through the last glacial period, if not through one or more similar antecedent periods.' *

Dr. P. W. Joyce states that 'all our native animals, without a single exception, have been commemorated in names of places . . . by a study of local names we can tell what animals formerly abounded, and we are able to identify the very spots resorted to by each particular kind.'†

The *Cervus* (*Megaceros*) *hibernicus*, or Irish Elk, is the noblest representative of the extinct mammalia of Ireland—as at present known to us—with which primitive man was doubtless contemporary. The largest stags were about seven feet in height, whilst the expanse of their antlers—in some cases—attained to upwards of twelve feet. Although the bones of this gigantic animal are found in recent deposits, both in England and on the Continent; yet, judging by the number of specimens discovered, Ireland would appear to have been its favourite habitat. The fact may, perhaps, be attributable to the comparative scarcity of its natural enemies, the larger carnivora.

The evidence that this animal was contemporary with man rests on the discovery of its bones, in a very broken state, in the Cave of Ballynamintra, and in company with stone implements. In the lake-dwellings at Cloonfinlough its bones were also discovered in a fractured condition. Among the abundant mammalian

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* *The Cause of an Ice Age*, pp. 41, 177.
† *Irish Names of Places*, p. 468.

débris, raised from the kitchen-midden, or refuse-heap, of one of the lake-dwellings in Lough Rea, was the

Fig. 1.—*Cervus* (*Megaceros*) *hibernicus*, or Irish Elk, from fossil horns in the Science and Art Museum.

head of a megaceros, measuring about thirteen feet from tip to tip of the antlers; whilst a writer* states that

* *Archæological Journal*, vol. vii., p. 342.

'stone-hatchets and fragments of pottery have been found, with the bones of this creature, under circumstances that leave no doubt of a contemporaneous deposition.' In the refuse-heap of the lake-dwelling of Breagho, portion of an antler was discovered, sawn and perforated with holes. It does not, however, necessarily follow that this relic had belonged to an animal killed and utilized by the lake-dwellers; the horn may have been found by them on some spot where it had rested for ages. The same explanation may be applied to the discovery of portion of a megaceros in a pagan cist.

Of the fact that the reindeer was contemporary with man in Ireland, the evidence is more meagre than is the case with the megaceros, although it roamed in company with it amidst the plains of ancient Erin. Of the several existing varieties of reindeer, the one to which the Irish examples may be referred is the Arctic cariboo, in which the antlers are slender and rounded, as contrasted with the more massive and flattened beam of the horns of the woodland cariboo found in Eastern Canada and the Rocky Mountains. Bones of the reindeer were found in the Cave of Ballynamintra, in conjunction with traces of its occupation by man.

That the bear existed contemporaneously with man in Ireland—strange to narrate—rests upon more deficient evidence than that with regard to the reindeer, although in Scotland it survived until the middle of the eleventh century. The Celtic name for bear frequently occurs in old Irish MSS., and legends amongst the peasantry still recount its pursuit and capture by the heroes of antiquity. The skulls that have been discovered of bears demonstrate that the animal was of rather small size.

There can be no doubt that the wild horse existed in Ireland as a contemporary of several animals which are now extinct. In the Shandon Cave, at Dungarvan [states Dr. Leith Adams], the remains of six horses

Fig. 2.—Irish Reindeer, from fossil horns in the Science and Art Museum.

were found, together with those of reindeer, red-deer, bear, and wolf. In the Ballynamintra Cave, horses' teeth were found, together with the bones of megaceros, bear, and wolf, which had been associated with

human remains, and those of many still existing animals. It is possible that these horses had been used as food by the men of this period. The character of the associated remains, and the circumstances of their position, afford the principal evidence as to whether the bones should be referred to wild or domesticated varieties of the horse. There are several well-authenticated instances of horses' skulls having been found in caves at Ballintoy, Co. Antrim, and near the shores of Lough Erne. It is not improbable that the wild horse may have survived up to about the time when most of its above-mentioned earliest contemporaries had become extinct.

The red-deer, although now restricted to a small area in Kerry, appears, judging from the wide-spread abundance of its remains, to have been formerly plentifully distributed all over the kingdom. The cave of Shandon proves that it co-existed with the mammoth, and its bones abound in the marl underlying the peat formation, where those of the megaceros have been found. When O'Flaherty wrote, they were very numerous. Dr. Thomas Molyneux, his friend and contemporary, says: 'The red-deer, in those our days, is much more rare with us in Ireland than it has been formerly.' So late as 1752 they abounded in the barony of Erris, Co. Mayo; and the celebrated Irish scholar, O'Donovan, heard from an old native—about the year 1848—that in his youth red-deer were common, and that he frequently saw them grazing on the mountains among the black cattle.

Rudely-formed enclosures, surrounded by staked fences, have often been found under a considerable depth of bog. They are by some considered to be traps into which the deer were driven. This class of

structure consists of a long lane, formed of staked lines of palisading, gradually narrowing, but at the end expanding into a circle, where the deer could be killed at leisure. This *cul-de-sac* is supposed, sometimes, to have terminated in a quagmire, for many of the skulls appear to have been broken in the forehead, which could be easily effected when the animal was embedded in mud or in a pit-fall. Among circumstances corroborative of the number of red-deer that existed in former times may be mentioned the discovery of quantities of the tips of stags' horns in the refuse-heaps of lake-dwellings and in many other localities. These pieces of bone—from three to five inches in length—were apparently cut off from the remainder of the horn, which was probably manufactured into various implements; whilst pins, fibulæ, weapons, tools, and ornaments, formed of those tips of horn abound in collections of antiquities.

Despite the numerous legends and the folk-lore relative to the hunts of giants of ancient days after magical boars, yet prosaic investigation suggests that the herds of wild pigs which infested the forests were all derived from an introduced breed. The discovery of remains of the pig in Ballynamintra Cave, however, renders it, at least, not improbable that there may have been a wild pig, despite the fact that all the skulls which are recorded belong to the same variety, namely, the long-faced Irish pig, which, even as a domesticated breed, is now nearly (if not altogether) extinct, its place having been taken by others which are more suitable for fattening purposes. Skulls of this breed are very commonly found in the refuse-heaps of lake-dwellings.

The wolf existed in Ireland up to the commencement of the 18th century, when the last of those animals is

recorded to have been killed in the Co. Kerry. The bones of the wolf are not easily distinguishable from those of the dog. They have been found in association with those of the fox, horse, reindeer, red-deer, bear, hare, and mammoth, in Shandon Cave, Co. Waterford, together with remains of the megaceros in the Cave of Ballynamintra; but in all, traces of wolf bones are very rare.* This is most singular, when historical references to this animal are considered. Other wild animals which then existed, and yet with us, are—the Alpine hare, otter, marten, badger, and fox; whilst the following, known to have existed in Britain, appear not to have been present in Ireland in pre-historic times—*i. e.* the beaver, roebuck, moose, and the urus or wild ox.

The Irish hare is considered to differ from that of Great Britain, and exhibits, in several respects, characteristics intermediate between the two descriptions of British hare. The difference in the fur of the British and Irish species is very observable, the colour of the latter being much lighter; the most obvious divergence is in the tail, the upper surface of which is black in the English, and white tinged with grey towards the base in the Irish hare.

* The following order, made by James I. for the destruction of wolves in Ireland, is taken from the Patent Rolls:—'The King being given to understand the great loss and hindrance which arose in Ireland by the multitude of wolves in all parts of the kingdom, did by letters from Newmarket, 26th November, 1614, direct a grant to be made by patent to Henric Tuttesham, who by petition had made offer to repair into Ireland, and there use his best skill and endeavour to destroy the said wolves, providing at his own charge, men, dogs, traps, and engines, and requiring no other allowance save only four nobles sterling, for the head of every wolf, young or old, out of every county, and to be authorized to keep four men and twelve couple of hounds in every county for seven years next after the date of these letters.'

The pre-historic mammals domesticated by man were—if judged by the traces they have left—not numerous. Foremost stands the Irish wolf-dog, generally considered to have resembled the present rough-haired deer-hound of Scotland, and the formidable character of this dog is the subject both of history and tradition. 'These records it is, moreover, now fairly ascertained do not exaggerate the power and strength of an animal which was the faithful companion not only of the hunter, but possibly also of the warrior, in far remote, pre-historic, as well as in more recent times,' for it appears there is very positive evidence that there were in Ireland, formerly, two races of wolf-dogs, one approaching the greyhound, the other the mastiff type. The discovery of several specimens of the crania of this kind of dog in the refuse-heaps of lake-dwellings has afforded a good opportunity of making comparative examinations. The skull measurement of one of these 'crannog dogs' was compared with that of an average modern German boar-hound, and the Irish skull was in every way the most capacious. In the Ballynamintra Cave, besides the bones belonging to the wolf, other specimens were referred to a dog even taller than the wolf. 'This animal may have been domesticated by the hunters, who are believed to have split the Irish elks' bones for extraction of the marrow, and who manufactured the stone implements which were found in the cave.'

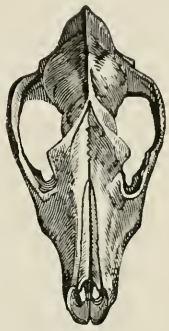


Fig. 3.
Skull of Irish Wolf-Dog.

The refuse-heaps of lake-dwellings afford evidence of the presence of sheep and goats; but though the

latter appear to have been first introduced, there is evidence that sheep were in Ireland before the Christian era, for some of the best authorities are of opinion that both races were introduced into the country and domesticated by man. Several crania of sheep found on the site of the lake-dwellings at Dunshaughlin indicate the existence of four-horned varieties, and one

Fig. 4.—Irish Wolf-Dog of the Greyhound type.

of them has five distinct horn cores. 'The mention of wild cattle by early Irish historians, though not unfrequent, does not tend to materially modify the conclusion arrived at from a full consideration of the evidence,' which is, that the original stock from whence they were derived was first introduced from the Continent of Europe to the British Isles by pre-historic man. The skulls obtained in ancient Irish lake-dwell-

ings, as well as in caves, bogs, and river deposits, indicate the existence of two well-marked races—the Celtic short-horn, with small drooping horns, and its ally, distinguished by a remarkable protuberance or frontal crest between the horn-cores; and sometimes altogether unprovided with horns, like modern 'polled' breeds.*

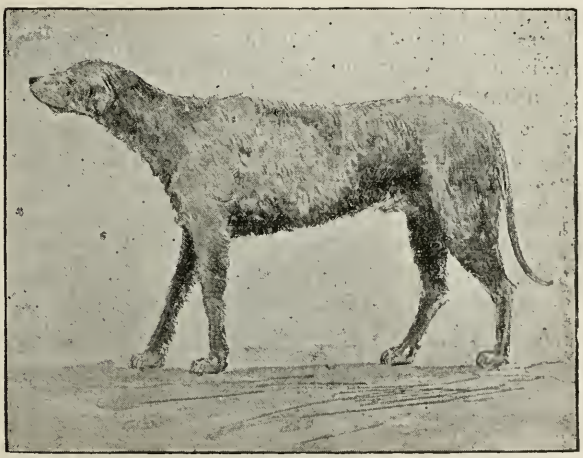


Fig. 5.—Irish Wolf-Dog of the Mastiff type.

The present geological era is characterized by the disappearance or 'removal' of those animals least

* For further particulars relative to the domesticated mammals of ancient Ireland, see an article by Sir William Wilde in vol. vii., *Proceedings, Royal Irish Academy*. The foregoing account is taken from a Paper, entitled, 'On the Collection of the Fossil Mammalia of Ireland in the Science and Art Museum, Dublin,' by Dr. V. Ball, C.B., F.R.S., in the 3rd vol. (series ii.) of the *Scientific Transactions of the Royal Dublin Society*.

ministering to the necessities and uses of man, as well as by the progressive melioration and sporadic increase of animals specially adapted to his service and support. This law of nature extends even to the occasional displacement of indigenous floras, by introduced plants. 'Exaltation of type seems the one essential condition of continuity, even with Nature's grandest pattern—man; for wherever improvement is arrested or undeveloped, extinction impends.'

Fig. 6.
Portion of Skull of Four-horned variety of Sheep.

Races in a state of barbarism either die out at once in presence of a stronger and more civilized people, or

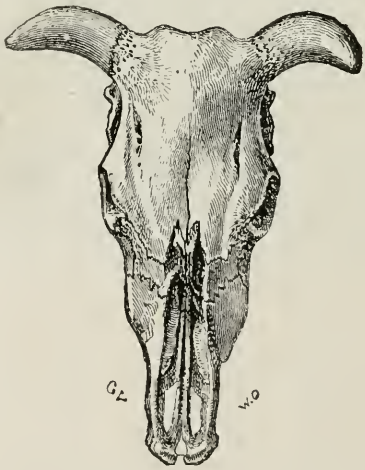


Fig. 7.—Skull of Celtic Short-horned Ox.

their debasing characteristics are effaced by assimilating intermixture with the intruding community. Man

cannot be considered as an insulated being, he is but one link in the great chain of animal creation.

It has been remarked that the brains of most savages, and the skulls of most primitive races are larger, than — in theory—they ought to be; often rather larger than the brains and skulls of the average masses inhabiting the great cities of the present day. But this need not cause surprise if the life of intelligent interest passed by the savage child be taken into consideration. From the tenderest age he was observant of all the devices practised by his parents for procuring clothing, food, means of defence, in short, all the essentials of existence; the natural result of his wild life was health and strength; indeed on the principle of the survival of the fittest, it could only be the robust who lived through the hardships and climatic exposure incidental to a savage life. The greatest incentives to exertion, on the part of primitive man, are hunger and thirst, heat and cold; without such spurs to original sloth we should still probably be eating acorns, chipping flints, and 'making ourselves as comfortable as might be in the company of other species.'

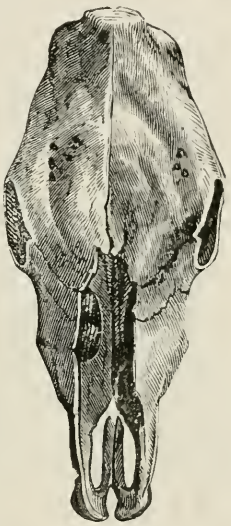


Fig. 8.
Skull of Hornless Ox.

Almost everywhere, throughout Europe, there are traces of a numerous people, unknown to history, who have left very material traces of their occupancy of the land, and tradition points to an early race of diminutive

folk who inhabited Ireland, and possibly they resembled the Esquimaux and other tribes dwelling in the Northern latitudes in our day. Of them have been found no recognizable crania, and but scanty osseous remains. They probably hunted the reindeer and the megaceros, and were exterminated—driven out of the country, or perhaps partly absorbed by succeeding tribes of immigrants. The Esquimaux and cognate people appear to be all members of the most primitive family amongst the nations; climatic influence has tended to mould them more and more into one type, so that it is quite possible that many centuries back, the various tribes now forming this people may have presented more variety of characteristics.

The waters surrounding the Orkney and Shetland Islands were fished in by Esquimaux tribes so late as the seventeenth century, and it is probable that this race constitutes a large proportion of the population of the outer Hebrides. That in certain localities the inhabitants of the United Kingdom show traces of such a line of ancestry is the opinion of many modern ethnologists, and the Iberian theorists discern a similar type in the 'small and swarthy Welshman,' the 'small dark Highlander,' and the 'Black Celts' to the west of the Shannon.

The physical conformation of the races that occupied the land is represented by their osseous remains; these, though less abundant than could be desired, are still to a considerable extent accessible, and thousands of primitive sepulchral remains yet invite examination. The engineer and the agriculturist are, from time to time, bringing to light unlooked for ancient interments, and though some, doubtless, have been carefully noted by competent observers, yet in several instances,

through ignorance of their value, many crania—which of course are to be met with whole, only in carnal interments—have either been destroyed or lost.

Like most anciently inhabited countries, Ireland has, in past ages, been the recipient of successive waves of population and anthropologists assure us that at least two distinct races of immigrants—each of very marked characteristic type—had landed on our shores. These can now (it is alleged) be classed and identified by the configuration of their crania; for as the brain is the

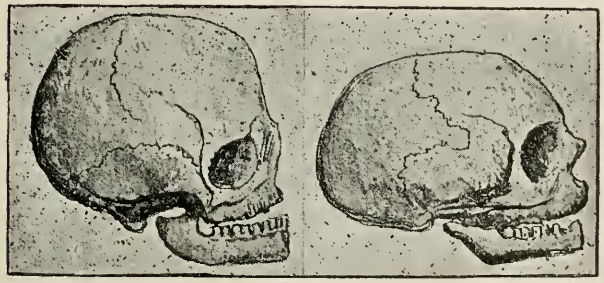


Fig. 9.—Examples of Round-headed and Long-headed Skulls. About one-seventh real size.

seat of the intellectual capacities, the structure of the skull is of primordial importance. The relation of the length of the cranium to its breadth is regarded as one of the most characteristic marks of distinction between different races.

The form of skull attributed to the primitive inhabitants of Ireland is distinguished by great length from the front to the back of the head, and comparative narrowness of the skull; hence the type is by scientists styled dolicho-cephalic, or long-headed. It is alleged

that the specimens presented are too numerous and have been found over too wide an area to permit of their being considered mere varieties—especially as a similar form of skull is to be met with amongst the aboriginal remains found in England, and over a large proportion of the continent of Europe.

Explorers who have not made the physical conformation of the human frame their study possess, however, no standpoint from which to test their own ideas. Often, when opening a 'Giant's Grave,' workmen have drawn attention to the great size of the human bones they had disinterred, when in reality they had formed the frame-work of a man of but medium stature. The minds of the searchers were imbued with the idea that the bones must of necessity be of superhuman size, for were they not found in a 'Giant's Grave'? In the same way the judgment of an antiquary may, insensibly to himself, be biassed by his own imagination regarding some preconceived theory. A distinguished writer on archæology has observed: 'There is no failing to which antiquarian observers seem more liable than seeing too much.'

The second type of Irish crania is, by some, subdivided into two classes—both, however, belonging to what scientists have named a brachy-cephalic or round-headed race.

The first class is represented by the Celt. The skull is of medium size, well-shaped, but with projecting upper jaw; the chin not massive; the nose short and wide, exhibiting the peculiar characteristics so familiarized to the public by caricaturists of the Irish peasantry.

The second subdivision of the crania of the round-headed race is represented by what may be designated

the Norse type. This hardy race, or races, be they styled Formorians, or sea-rovers, made their appearance on the Irish coast long before authentic history begins. The Norse skull is regular, the nose long and aquiline, the face narrow, the forehead straight and of medium height; a long oval outline in the vertical aspect of the skull, whilst the lower jaw is distinguished by its square outline and massive structure—giving a distinctive character to the face—and it differs but little from the form of skull of the Normans.

There are also slight varieties in the form of the crania of the long-headed or primitive race, for the progenitors of the early inhabitants of Ireland probably arrived in detached groups and at considerable intervals of time, doubtless representing successive immigration of varying tribes and peoples.

Variety of shape in crania (within certain limits) appears to be the law of nature—not the exception—and each race exhibits countless variations of mental combinations. This is suggestive and calculated to impress the necessity of great caution and extensive observation of facts, before venturing to draw general conclusions. Classification of crania into distinct types, and then making that type the badge of a race, is a theory of doubtful value. At any public meeting how many varying types of crania may be observed.*

* Professor Huxley is of opinion that the greatest and most strongly-marked differences in skulls is not a proof that they are of different races. In his examination of the two celebrated crania found in the caves of Engis and Neanderthal, presumed to be amongst the oldest remains of man, he says:—'It would be difficult to find any two which differ from each other more strongly, but I am not willing to draw any definite conclusion as to their specific variety from that fact. . . . are not the variations amongst the skulls of a pure race to the full as extensive!'

Open an old pagan 'Caltragh,' and the same result becomes apparent; skulls of every size and form may be unearthed, though all the remains are referable to about the same period of time, and probably all may have belonged to one sept; yet had these skulls been found disassociated, they might have been viewed as representative of totally different races.

It is worthy of observation that extreme types of crania were represented in two specimens discovered in the well-known 'find,' within the tumulus in the Phœnix Park, Dublin, demonstrating that the commonly received theory of cranial forms being more and more stereotyped the further back we penetrate into the obscurity of the past, is not always corroborated by accurate observation. The occupancy of a common tomb would imply that they were contemporaneously interred, and that they belonged to members of the same family or tribe, and as only bone and flint implements—together with a shell necklace—were found, it may be considered that the period of interment was that of a barbarous state of society.

In most instances of the discovery of perfect crania —even those of children—the teeth appear to be much worn, as if by attrition of some very hard kind of food, and the process of degradation keeping pace with the age of the individual; the teeth, nevertheless, although they may be much worn, yet, with few exceptions, are found to be in a sound and healthy condition. The gradual abrasion of the teeth is materially influenced by the nature of the food used. This is proved by the fact that the teeth of sailors, who, during the greater part of their lives, live upon hard biscuits, are often found to be much worn down by the constant friction produced by this diet.

All we may be said to know with regard to primitive man is that he was present in the country in times very remote, hunted the megaceros and reindeer, as well as other animals still present with us. It is probable that this race approximated in type to that now inhabiting the Arctic regions. It has been suggested that the megaceros and reindeer migrated, at stated seasons, from Britain to Ireland, across the frozen sea, for the climate appears to have been glacial in character, and the primitive flint-using folk advanced and retired with the icy mantle, either following the animals on which they subsisted, or driven backward by a superior race or races.

CHAPTER II.

ARE THE EARLY IRISH RECORDS AUTHENTIC?

CHARACTERISTIC traits of human nature are pretty much the same all the world over, and therefore instead of looking on the pre-Christian inhabitants of Ireland as different from ourselves, let us, on the contrary, place ourselves in imagination in their position, live and act as we imagine we should have done in this exchanged existence, and throwing off the veneer of modern civilization, we shall probably arrive at the conclusion, that, similarly circumstanced, we might have lived and acted as did our predecessors, and so furnish an illustration of the epigrammatic saying: 'Grattez le Russe et vous trouvez le Tartare.'

Investigation of the truth is the object in view: therefore the subject ought, if possible, to be approached without prejudice, and in order to arrive at the truth, it is desirable to test the opinions and conclusions of those who, by a careful analysis of the probabilities and facts recorded by them, have travelled over the same ground before. The Irish reading public are, however, moved by impulse rather than by reasoning; 'in nothing is this more apparent than when the question of the genuineness of ancient Irish history is for a moment called in question.'

Antiquarian research, in Ireland, may, with advantage, be directed towards filling in the social history

of primitive man; articles which are the result of the handiwork of the aborigines, illustrate, with much exactitude, life in the olden days, and cannot fail to assist, in that object, from the deductions which must be drawn from a state of society that necessitated the fabrication of those relics. A good antiquary now-a-days is said to abhor a theory as much as, it is alleged, nature abhors a vacuum, and to launch a speculative theory on the troublous waters, where the currents of Paganism and Christianity meet in one blended stream, is like launching a ship into the Maelstrom—it is in almost certain danger of effacement. The period during which Christianity has reigned in Ireland is comparatively insignificant when compared with that occupied by pre-Christian religion or religions. It is strange that of this great epoch of the pre-historic past we know so little, that our knowledge may be compared to a rivulet, our ignorance to the ocean. Pride in ourselves, pride in our ancestors, are common foibles of human nature; occurrences which redound to the glory, either of the individual, or of the community, are amplified and dwelt upon, whilst incidents derogatory to prestige are glossed over or ignored. O'Donovan relates how some of his former most intimate friends became his enemies on his expressing grave doubts regarding the authenticity of ancient Irish history.

That which is prevalent now-a-days existed in times more ancient, and especially on that border-line where 'the Creeds of Paganism had not ceased to be the superstitions of Christianity.' The Bards and Chroniclers of Erin doubtless possessed accounts of the first settlement of the Island, probably more or less founded on tradition, and having more or less a sub-stratum of truth; but on the arrival of the Christian missionaries,

and the acquisition by the monks of the literary or traditional sources of information, then these ancient heathen histories, tales, and poems, became embedded in a mosaic of miracle-stories and classic-legends, so that it is nearly impossible, now, to separate the chaff from the grain. This school of amalgamated Pagan and Christian thought, amongst other absurdities, traces the pedigree of the first settlers in Ireland up to Adam. Now, that part of the assertion is correct, namely, that Adam was the first man; for we possess a higher authority than 'Irish Pedigrees' for the assertion —but there must be grave doubts regarding the connecting-links in the chain of unbroken descent, as therein given, from our first Parent.

'With respect to the study of our early history, as extracted from the annalists and biographers,' remarks Dr. J. K. Ingram,* 'I will only say that what we most require is, in my opinion, an increased application of the critical spirit. We have often in the past too readily assumed the truth of any statement found (as the phrase is) "in one of our old books," without examining the trustworthiness and the sources of knowledge of each authority. To take an example—in O'Curry's "Manners and Customs of the Ancient Irish," there is abundant learning—a wealth of quotation from the Chronicles—but in criticism it falls, I think, far short of the works of the recent Scottish historians. Criticism, I am aware, is not always popular.'

The heroes and heroines of the earliest traditions are certainly not Christians, whilst in the prevalent narratives, the varnish of Christianity is thinly applied. Most of the tales, at least those that have been at present

* *Proceedings, Royal Irish Academy*, vol. ii. (ser. iii.), p. 125.

translated, are but clumsily patched together, so that the junction of the Pagan and Christian portions is quite apparent. Take, for example, the legend of the formation of the present Lough Neagh,* as given in the *Lebor na H-Uidre*. The scene is laid in the first century of the Christian era—consequently before the introduction of Christianity into Ireland. In the King's palace, which stood in the centre of the plain now occupied by the lake, was an enchanted well; its origin was, to say the least, very peculiar—and when not in use it was kept covered as, owing to its magical properties, it would otherwise burst forth in a raging flood. Through neglect of the 'person in charge,' it was left one morning uncovered, when all the members of the King's household, with the exception of three, were drowned, and the present sheet of water was formed. One of the persons then preserved was a woman styled Liban, who, together with her lap-dog, was, by magic, preserved in safety beneath the waters. Liban soon became tired of her inactive life, and beholding, with envy, the lively tenants of the lake darting about and around her, expressed the wish of being changed into a salmon. Instantly, with the exception of her head, she was thus transformed, whilst her lap-dog became an otter, and in this manner she continued to roam for the space of three hundred years, until—and here the Christianising of the old story visibly appears—she is caught in the net of an Irish saint, is brought ashore, resumes her human form, sings her story in melancholy verse, receives the rites of the Church, dies

* Two remarkable properties have been ascribed to Lough Neagh—a power of healing diseases, and a power of petrifying wood and other substances. An analysis of the water, however, discloses nothing to warrant such assumptions.

immediately, and is buried in all the odour of sanctity.

In these semi-historical tales and legends it is singular how comparatively rare are the references to the ancient gods of Erin, and although the early fathers tell us less of heathendom than they knew, still it is difficult to understand how the clerical pruning knife was able, so scientifically, to cut off the principal characters from the scene, and leave it so readable; yet 'however interesting to scholars in their original form,' remarks Dr. Ingram, 'I do not think these tales will ever win their way to general esteem among cultivated readers, except as transmuted into shapes better adapted to our ideas, and, with a certain breadth of modern thought and feeling subtly mingled with their substance.' St. Patrick is dragged into the legend of Cuchullin; sometimes, though in rare instances, Druids appear on the scene, but how are they depicted? Not as dignified priests—the guardians of religion and of science—but such as they are afterwards described by their opponents—the Christian missionaries—as mere jugglers. It seems to be now admitted that the iron age did not really commence in Ireland much before the introduction of Christianity, and yet these heroes of romance are represented as cutting at each other with swords of iron—like the Vikings of later date.

There is great similarity between the Persian story of Rustam and the bardic tale of Conloch: an Irish chief with an unpronounceable name and King Midas were both afflicted with asses ears; a king of Macedon and also a king of Erin effected the destruction of their enemies by apparelling a number of young men to represent women. Thersites and Conan were both bald, were great boasters, and great cowards; Balor and

Perseus in some respect resemble each other; in both stories the precautions taken are almost identical—precautions that were defeated by supernatural means—and in both instances the decree of destiny is fulfilled by the murder of the grandfather, whilst the peculiar property of Balor's eye has its parallel in classic myth. The infant Hercules strangles a serpent when yet in his cradle; the great Irish hero Cuchullin when a child strangles a huge watch-dog, the terror of the country side. The Greek Adonis and the brave and gay Diarmuid O'Duibhne are each killed by a boar; this last-mentioned legend was certainly the most popular and wide-spread tale current amongst the Irish-speaking population, and is, of all the legends which have descended to our days, that which has been least Christianised.

Of legends still current, some may be traced back to an Eastern origin. In the armorial bearings of the borough of Sligo a hare is depicted as being held fast by an oyster. According to local tradition the hare trod accidentally on an open oyster, and the bivalve resenting this intrusion at once closed on the foot of poor puss. A Cork boatman recounted a similar anecdote of a rat going to feed on an oyster, whose shell lay invitingly open, at low water; but the oyster, closing on his snout, held him fast until he was drowned by the returning tide: this tale agrees with one of La Fontaine's fables. The same incident—but in connexion with a fox—was narrated, some centuries ago, to one of the earliest western travellers as being then current in India. Thus a story may be traced from land to land, and from age to age; and this agreement is very interesting, as tending to point out the common sources from which our traditions were derived.

In old bardic legends there are, here and there, glimpses of past phases of thought and character calculated to arrest attention. This literature comprises a 'very large number of prose tales, relating warlike adventures, voyages, tragic events, visions and the like; many of these are still extant, and a considerable number have been translated or paraphrased, so that, though the renderings are sometimes unfortunate in point of style, an English reader can form a tolerable idea of their merit as works of imagination. As to this merit, the most opposite opinions have been expressed. Some have represented them as devoid of all value or interest; others have spoken of them as a literature of the first order, and have almost implied that the Irish intellect of the present day would find its best possible culture in their study. The truth, as usual, lies between these extreme views. We possess in Irish no work of genius comparable to the Nibelungen Lied, or the song of Roland. To speak of the Táin-Bo-Cuailnge* as a Gaelic Iliad, seems, to say the least, an imprudent comparison. But without any great continuous composition, there are in the remains which have come down to us passages of much beauty and tenderness; some of the tales are impressively and touchingly told, and there is one singular relic—"the Vision of MacConglinne"—which

* 'Even seven hundred and fifty years ago,' writes the Rev. E. Hogan, S.J., in his translation of *Cath Ruis na Rig for Bóinn* (p. ix), 'such things were looked on as "l'histoire véritable des temps fabuleux," as the scribe of the Táin Bó Cuailnge in the *Book of Leinster* writes at fol. 104 b: "A blessing on everyone who shall faithfully memorize the Táin in this form, and shall not put it into any other form. But I, who have transcribed this history, or rather fable, do not believe some things in this history or fable. For some things in it are delusions of demons, some are poetic figments, some seem true (*similia*), and some not; some are written to amuse fools."'

is instinct with genuine humour of the Rabelaisian type.'*

According to modern criticism these ancient stories naturally divide themselves into two epochs, one comparatively ancient, the other modern. The older series is that of which Cuchullin is the centre, and is supposed to have first been reduced to writing in the seventh century, when monastic chroniclers converted mythical tradition into pseudo-history, and the after-descent of these stories belongs to written literature rather than to oral tradition. In fact each fresh transcriber adapted them to the times in which he wrote.

The legends of the second epoch cluster around Finn Mac Cumhaill, who is placed in the third century of the Christian Era. It would appear as if most writers on the subject have accepted the date; but there is nevertheless a pleasing divergence of opinion; some hold that Finn was really a very ancient mythical personage, dragged down, so to speak, by the monks to almost Christian times, while some of the German school turn Finn into a ninth century leader of the Irish against the Danes of Dublin, by whom he was slain.

'Whether the ancient Irish, before the Christian Era, possessed a primitive alphabet, differing essentially from that in use in other parts of Europe, is a question which has been debated by scholars with great earnestness. Those who maintain the affirmative appeal to the concurrent authority of the most ancient Irish manuscript histories, according to which an alphabet, called Ogham, was invented by the Scythian

* Dr. J. K. Ingram in *Proceedings, Royal Irish Academy*, vol. ii. (ser. iii.), p. 122.

progenitors of the Gaelic race, and was introduced into Ireland by the Tuatha-de-Danaan about thirteen centuries before the birth of Christ.' They also refer to the oldest Irish romances, which contain allusions to the use of Ogham, either for the purpose of conveying intelligence, or for sepulchral inscriptions; they point to existing monuments presenting Ogham characters, and argue that they must be ascribed to a remote and Pagan period.

'Those, on the other hand, who dissent from this hypothesis, allege that the legendary accounts of the invention of Ogham bear all the marks of fiction; and they contend that the nature of this alphabet, in which the vowels and consonants are separated, furnishes internal evidence of its having been contrived by persons possessing some grammatical knowledge and acquainted with alphabets of the ordinary kind. As regards the testimony of romantic tales, they impugn its authority by questioning the antiquity of these compositions, which, at most, prove the belief prevailing at the time when they were written, as to the use of letters in a much earlier age. Lastly, they assert that a considerable number of the existing Ogham monuments are proved, by the emblems and inscriptions which they bear, to belong to Christian times.'*

Thus did a distinguished archæologist sum up the arguments advanced for and against the ancient use of alphabetical writing in Ireland, and little, if any progress in the elucidation of the subject has been since made; for with the knowledge, or want of knowledge of letters, is involved to a great degree the genuineness or untrustworthiness of the Irish Annals. O'Donovan conjectures

* *Catalogue, Museum Royal Irish Academy*, pp. 136, 137.

that the Irish had the use of letters* at the period of Cormac Mac Art, King of Ireland, about A.D. 253-277. The Romano-British Ogham bilingual inscriptions would appear, judging by the Latin lettering, to belong to a period certainly not earlier than from A.D. 400 to 500: bilingual inscriptions appear also in Ireland. The early church in Wales was closely connected with that of Ireland, and the fact that Ogham inscriptions in Britain are, it would appear, to a great extent coincident with the area of early Irish missionary work is a curious coincidence. 'The strong interest which the Oghams at first excited has somewhat diminished. Zeuss thought the method of writing which appears in them to be possibly of great antiquity, and Stokes believed there were found in them traces of a very primitive form of Celtic speech; but the tendency of recent research has been to bring them down to a more recent date, and the growing belief that they are often cryptic, that is, designedly obscure, has discouraged inquiry.'†

The serial arrangements of the letters of the alphabet is approximately the same in many ancient languages; this coincidence cannot be accidental, but points to the fact of the alphabets having been

* The poet Spenser, who cannot be accused of partiality for the Irish in his *View of the State of Ireland*, written in the sixteenth century, remarks:—'It is certain that Ireland hath had the use of letters very anciently, and long before England. Whence they had those letters is hard to say. Whether they at their first coming into the land brought them, or afterwards, by trading with other nations which had letters, learned them from them, or devised them among themselves, is very doubtful. The Saxons of England are said to have their letters, learning, and learned men from the Irish; and that also appeareth by the likeness of the character, for the Saxon character is the same with the Irish.'

† Dr. J. K. Ingram in *Proceedings, Royal Irish Academy*, vol. ii, (ser. iii.), pp. 127, 128.

borrowed from the same source, and the Ogham alphabet strikes the observer as being an older type of alphabet re-arranged.

Ogham inscriptions, in general, begin from the bottom and are read upwards from left to right; the alphabet consists of lines variously arranged, with regard to a single stem-line, or to the edge of the substance on which they are cut.

'The spectator, looking at an upright Ogham monument, will, in general, observe groups of incised strokes of four different kinds:—(1) Groups of lines

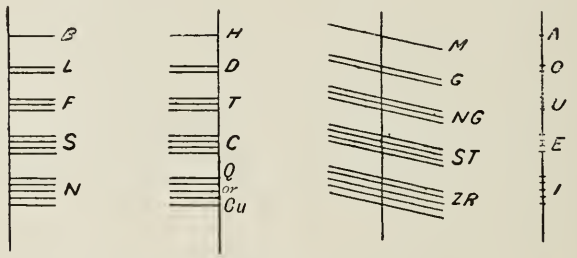


Fig. 10.—Ordinary Ogham Alphabet.

to the left; (2) others to the right of the edge; (3) other longer strokes crossing it obliquely; and (4) small notches upon the edge itself. The characters comprised in class (1) stand respectively for the letters B, L, F, S, N, according as they number 1, 2, 3, 4, or 5 strokes; those in (2) for H, D, T, C, Q, or CU; those in (3) for M, G, NG, ST, or Z, R; and those in (4) for the vowels, A, O, U, E, I. Besides these twenty characters, there are five others occurring less frequently, and used to denote diphthongs, and the letters P, X, and Y. In some instances the Ogham

strokes are cut upon a face of the stone, instead of being arranged along an edge. In such cases an incised stem-line, or an imaginary line passing through the shortest, or vowel strokes, takes the place of the edge.'*

The greater number of the Ogham inscriptions as yet discovered have been found in the south of Ireland, principally in the counties of Kerry and Cork; the stones appear to be, for the most part, sepulchral, or commemorative; yet, though several proper names occurring on Ogham monuments are to be met in the Irish Annals, it is doubtful whether any have been so identified as to give the data of the period in which the individual lived whose memory it was intended thus to perpetuate. 'It is obvious,' remarked the late Sir Samuel Ferguson, 'that if purposes of secrecy or curiosity were desired, the cipher might be made more or less abstruse by varying the number of strokes, as by beginning with two or more at the commencement of each series—and a great number of examples of such cryptic Oghams may be seen in the tract on this subject in the "Book of Ballymote." They are all, however, resolvable into the original key-cipher, in which each set of five commences with a single stroke, and which, with the other more complex examples and certain arbitrary marks for vowel combinations, is also found in the same depository. With the key—available for the last five hundred years—we may be surprised to find the Ogham character still involved in so much mystery.'

It is remarked that many of the Ogham-inscribed stones are of a material foreign to the district in which

* *Catalogue, Museum Royal Irish Academy*, p. 138.

they have been discovered, and are generally formed of sandstone; this occurring so frequently would tend to show that a block of sandstone was sought elsewhere and brought to the required place, as being deemed more convenient for working upon. The old sculptors and architects appear to have possessed some knowledge of the chemical constituents of the materials with which they worked. Cashels, and the sustaining walls of passages and chambers—whether in tumuli, carns, or souterrains—may be formed of limestone or of the nearest description of stone available; but when the wish was to decorate a flagstone, careful selection was made not only of a durable but also an easily-worked material.

The stones, upon which Ogham inscriptions have been found, embedded in the walls of churches, demonstrate that they were merely utilised as building material, for some of them were placed in positions which prevented their inscriptions being read, and other stones were hammer-dressed on the angles, portions of the inscriptions having been knocked off in order to produce an angle suitable for the new purpose to which it was devoted. It is alleged that at a period when knowledge of the Ogham had been lost, or when the memorials had ceased to command the veneration of succeeding generations, these monuments were sometimes appropriated by Christians. A cross is reputed to have been carved on the uninscribed end of one stone, which had been originally fastened in the earth, and the stone was then turned upside down, the original top with its Ogham inscription being buried in the ground; whilst a writer, holding other views, alleges that he found a cross-inscribed monument, and into the sacred symbol some of the Ogham scores had

been sunk, thus demonstrating that the Ogham had been cut subsequent to the sculpturing of the cross. If the question be asked why these monuments do not all bear the sign of the cross, supposing that they all belong to Christian times, 'it may be suggested that in early times such may not have been the custom, whilst it is quite possible that some of them may be the monuments of Pagans, seeing that Paganism survived in Ireland for centuries after the arrival of St. Patrick.'

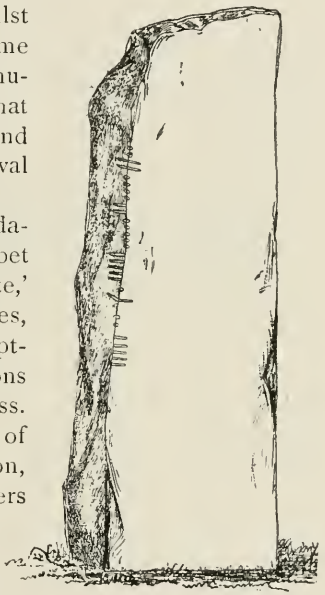


Fig. 11.
Ogham-inscribed Stone, from an underground chamber in a rath, Co. Cork.

Despite the tract elucidatory of the Ogham alphabet in the 'Book of Ballymote,' well known to antiquaries, the early essayists in attempting to read these inscriptions could make no progress. The ordinary methods of deciphering an inscription, which assume that the letters to be unravelled are divided into words, are inapplicable to the Ogham character, which is written continuously; yet a key was soon discovered, for in the course of investigation a group of strokes were identified as reading *Maqui*, the ancient genitive form of *Mac*, a son. This conclusion, it is stated, was afterwards corroborated from a source not then known to be in existence—

the monumental stone of Wales, inscribed in Roman characters, with accompanying Oghams. In Ogham inscriptions there is no indication of Christian hope, no allusion to any sacred name or scriptural reference, but only the dry formula of:—

(——) the son of (——)

the first name being generally in the genitive case; the word stone was supposed to be understood.

One example must suffice. Fig. 11 represents a monolith, formed of hard, compact, buff-coloured clay

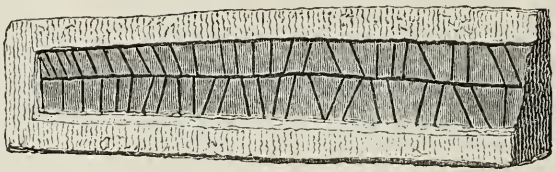


Fig. 12.—Scribed Stone from Ardakillen.

slate, twelve feet six inches in length—nine feet of which is above ground—two feet nine inches in average breadth, and nine inches in average thickness. It was found in an underground chamber of a rath in the townland of Coolineagh, parish of Aghabulloge, county Cork. After some vicissitudes it was erected in a position of safety, near St. Olam's Well, a place of great repute in all the surrounding country. The inscription is short, and occupies three feet six inches in length. It is quite legible, the scores being deeply and broadly cut:—

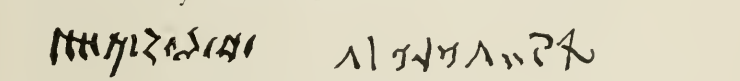
No, maqi Dego, *i.e.* No, the son of Deag.

The late R. R. Brash, in his work entitled *The Ogam-Inscribed Monuments of the Gaedhil*, remarks that the name No under the form Noe is mentioned at an early date

in the *Annals of the Four Masters* and other Irish manuscripts, whilst the patronymic has been found on other Ogham-inscribed stones.

Figs. 13 and 14 are examples of scoring on objects of bone and stone of probably a comparatively later date; they were found on the sites of lake dwellings.

It is alleged that of the many Ogham inscribed stones which have been discovered in the souterrains of raths, few bear the sacred symbol of the Christian Faith. These stones were merely used as materials by the rath-builders—perhaps so late as the tenth or eleventh century—and were drawn from more ancient



Figs. 13 and 14.—Scorings on Bone Pins.

monuments, probably from old disused graves or graveyards, and used by architects who felt no reverence for such memorials. At the end of the tract on Ogham, contained in the 'Book of Ballymote,' about eighty different forms of the alphabet are given, exhibiting thus the various modifications to which it had been subjected, and on this point it has been remarked that it was vain to assert that Irish grammarians who used and wrote about Ogham were unacquainted with Scandinavian or Anglo-Saxon runes, for amongst the Ogham alphabets figured in the 'Book of Ballymote' are two Runic alphabets, one styled 'The Ogham of the men of Lochan,' the other 'The Ogham of the foreigners.' The conclusion arrived at, as regarding the Ogham is, that it was framed by persons acquainted with the later and developed Runic alphabet.

Both O'Donovan and Petrie at one time were 'possessed with a violent and overpowering prejudice

against the genuineness of Ogham texts in general,' doubtless engendered by the fanciful and absurd speculations which then passed muster as antiquarian learning. 'Petrie,' remarked the late Sir Samuel Ferguson, 'it may well be believed, would have been glad, before his death, to have recalled his memorable challenge to the Munster antiquaries to prove that the Ardmore inscription is alphabetic writing of any kind; and O'Donovan, after he had subsequently seen the legends in the Dunloe Cave—discovered in 1838—gave a candid testimony to their genuineness and importance.'

Ogham appears to have been employed not only for mortuary inscriptions carved on pillar-stones erected over celebrated personages, but also in the same manner as we now use the Roman alphabet, for communicating by messengers.

Oghamic scribings have been found on bone-pins and other ornaments from the lake-dwellings of Ballinderry and Strokestown; the scorings seem to resemble runic characters, but Professor Stephens of Copenhagen, to whom photographs of the scribings were submitted, could not decide that they were actually runes; and neither Professor Rhys nor Sir Samuel Ferguson were able to interpret the seemingly well-marked Oghamic scorings. 'Amongst the curious collection at Anketel's Grove is a stone axe, on which is incised an Ogham inscription.'*

Vallancy, in his *Collectanea*,† makes mention of a silver brooch, bearing on it an inscription in Ogham character. The brooch in question was discovered in

* *Journal, Kilkenny Archæological Society*, vol. ii. (new ser.), p. 447.

† Vol. vii., p. 149.

the year 1806 by a peasant turning up the ground on the hill of Ballyspellan, in the Barony of Galmoy, Co. Kilkenny. The front of the brooch is ornamented by a device of entwined serpents; the back presents four lines in Ogham character; all the words, with one exception, are proper names; the brooch is identified as belonging to the latter part of the eleventh or commencement of the twelfth century.

It would seem that amongst people in a very rude state of society communication can be made from great distances. The late E. T. Hardman, when on the Geological Survey of Western Australia, about the year 1886, caused a message to be conveyed several hundred miles, from the interior to the coast, by means of notches cut on a stick by natives. These Australian 'message' or 'talking sticks' are very curious, for they belong to a people devoid of what we look upon as alphabetical knowledge; yet the notches or lines are interpreted by the recipient in the sense intended by the sender. They are mentioned in Brough Smith's account of the aborigines of Victoria. Apparently, however, the matter has not yet been treated by a writer competent to throw a clear light on this interesting subject;* at any rate, messages

* Since the above was written the following article bearing on the subject appeared in the *Saturday Review*, April 15, 1893:—

'Before us there lies a Rudimentary Letter. It is a piece of wood, about five inches long by one broad; it is painted red with blood and ochre, and has a kind of neck at about two inches from the top; round this neck a string is fastened; at the very head is incised what seems to be a capital T; beneath this is a large 7, as it seems to European eyes, and a crescent moon on each side. Below there is a broad arrow: ↑. On the left-hand side, beneath, is a row of 7s. On the back are many slanting notches, two straight lines, and the field below is filled up with the herring-bone pattern.

'This object is a Message Stick of the Wootka tribe, who dwell sixty miles west of Lake Nash, in the northern territory of South

in the present day thus conveyed in Australia amongst a rude and barbarous population, and for long distances through hostile tribes, point to the fact that the initial stages in the art of writing are made at a very early period in human progress.

It is alleged that among the Fijians men sent with messages were in the habit of using 'certain mnemonic aids,' whilst the New Zealanders 'occasionally conveyed information to distant tribes, during war, by marks on gourds!'

According to an old Irish Bardic narrative, on one occasion, the mythical hero Cuchullin, when traversing a forest, saw an inscribed pillar-stone, and hung round it a verse in Ogham character carved by him upon a withe. The same hero is elsewhere represented as sending information to Maeve, Queen of Connaught, by means of cutting or scribing on wands.

Australia. It is carried by an ambassador on a commercial mission to a distant tribe, whom we may call Nootkas. The markings on the back are tribal marks, early heraldic bearings; and these are the ambassador's credentials. If he bore a stick whose meaning he could not explain, he would be in the position of Bellerophon. It would be understood that he is to be speared by the tribe to whom he goes. On the back, besides the heraldic marks, are two straight lines. These mean that he is carrying two long and heavy spears as objects of barter. The 7, again, is a fighting weapon, a kind of wooden axe. The crescents are war boomerangs. The T ↑ means that he is to stop at the station of a squatter, who uses this mark as a brand for his sheep. Here he is to leave the heavy boomerangs and spears. The crowd of 7s means that he is to get as many of these wooden axes from the other tribe as he can. Certain triangular marks represent the number of days during which he may be absent. The whole stick thus reads:—"The Wootka tribe to the Nootka tribe. The bearer carries boomerangs and spears. These he is to barter with the Nootkas for wooden axes. His leave of absence is for a week. He is to find the Nootkas near Thompson's station."

'This stick is at once the bearer's credentials and his invoice, so to speak. If he goes against his instructions he may be speared on his return.'

The son of a Scottish chief is described as cutting Ogham characters on the handle of a spear. In A.D. 408, Corc, son of the King of Munster, was driven by his father into exile. He fled to the court of a Scottish chief, but before appearing in the king's presence, an Ogham inscription on his shield was discovered, and deciphered, by a friend, who thus saved the prince's life; the inscription being to the effect that, should he arrive at the Scottish court by day, his head was to be cut off before evening; and if by night, it was to be cut off before morning.

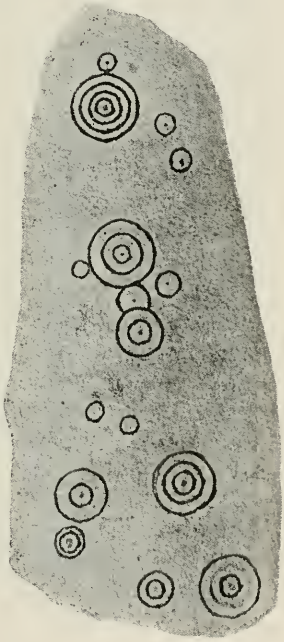


Fig. 15.—Rock Scribings.

What the peculiar marking called rock-scribing' represents is a question still unanswered, though numerous conjectures have been hazarded. Cup-markings, incomplete rings, a series of circles round a central cup — sometimes with a radial groove through the circles — these are the commonest types. It has often been advanced that these incisions in the hard rock could only have been produced with metallic implements, but it is stated that a person experimenting, with only the assistance of a

flint chisel and a wooden mallet, cut, in the space of two hours, nearly an entire circle on a block of granite which bore archaic devices.

Fig. 16.—Rock Scribings.

The megalithic chambers in the carns on the hills over Loughcrew, County Meath, are more lavishly adorned with types of primeval sculpturing and devices than those at present known in any district except France, for Ireland possesses a collection of this species of pre-

historic ornamentation which, in singularity, number, and quaintness of design, is approached in point of interest only by some of the great stone chambers of the district of the Morbihan. In Ireland, cup-markings appear to be the commonest form of ornamentation, and they present two leading varieties, *i.e.* circular hollows of more or less depth, and of a diameter varying from eighteen inches to as little as one inch. These depressions sometimes occur singly, but usually they are in groups; not unfrequently around, or partly enclosing each, may be observed one or more incised lines, often of considerable depth, to which other markings and variations are occasionally added. Somewhat similar rock-scribings abound in Yorkshire, in Northumberland, on the Cheviot Hills, near Edinburgh, and in the Orkneys.* Various attempts have been made to decipher their meaning. The Right Rev. Charles Graves, Bishop of Limerick, propounded the theory that these circular rock-carvings were rude maps of raths, and observes :—

'It was to be presumed that the persons who carved the inscriptions intended to represent circular objects of some kind; but what could these objects have been? Some have suggested shields. This notion seems inconsistent with the fact that the same stone presents so many circular symbols of different sizes, varying from the small shallow cup of an inch or two in diameter to the group of concentric circles two feet across. It also seems probable that, as shields, in general, used to bear

* The 'dot and circle pattern' is probably the *Ateis*. This emblem is stated to be almost identical in Hittite, Cypriote, Cuneiform, and Egyptian. To solve the enigma of these scribings we must go afield. What does this style of ornamentation represent to the mind of the aborigines of Australia?

distinctive devices, these would re-appear in the inscriptions; but the inscribed circles exhibit no such variety as might have been expected on this hypothesis. Again, if the circles represent shields, what could be meant by the openings in the circumference of many of them. Lastly, what connexion could there be between the idea of shields and the long lines appearing in the Staigue monument, or the short lines on that of Ballynasare?

'Another idea was, that these figures were designed to represent astronomical phenomena. This notion was perhaps the most obvious, and the least easily disproved. It harmonizes also with what has been handed down respecting the elemental worship of the Pagan Celts. Nevertheless it seems open to obvious objections. In astronomical diagrams, one could hardly fail to recognize a single symbol conspicuous amongst the rest as denoting the sun or moon, or two such symbols denoting both these bodies. One might also expect to see some delineation—even by the rudest hand—of the phases of the moon. We look in vain for these indications of an astronomical reference in the groups of lines and circles. Again, this supposition fails to account for the openings in the circles, and the lines which appear in connexion with them.

'It has been suggested that these circles were intended to serve as moulds in which metal rings might be cast. This explanation is decisively negatived by the fact that the circle occurs on parts of the rock which are not horizontal. Another proposed idea is that the circles were used for the purpose of playing some game. The great dissimilarity which exists between the figures on the different stones renders this explanation untenable. The theory which appeared the most probable,

was that the circles were intended to represent the circular buildings of earth or stone of which traces still exist in every part of Ireland. This conjecture was supported by the following considerations :—

'The circles are of different sizes; and some of them are disposed in concentric groups. The dwellings and fortified seats of the ancient Irish were circular; they were of various sizes, from the small cloghan or stone-house of ten feet in diameter to the great camp, including an area of some acres; and the principal forts had several concentric *valla*. The openings in the inscribed circles may have been intended to denote the entrances. The other inscribed lines may have represented roads passing by, or leading up to, the forts.'

The conjecture that these carvings were primitive maps, representing the disposition of the neighbouring forts, appeared to be a fanciful one, and the drawings were laid for many years on one side; finally, however, Bishop Graves having re-examined this subject, came to the conclusion that his original theory was correct, that the centres of the circles and the neighbouring cups and dots arranged themselves, generally, three-by-three, in straight lines, or approximately so, and that the ancient raths marked on the Ordnance Survey maps appear, to some extent, to be also arranged three-by-three in straight lines.

Another class of 'rock-scribings' consists of scorings, such as are found upon the flagstones of sepulchral carns, as at Lough Crew, Dowth, and New Grange. There is also a class of irregular scorings, some of which may be genuine Ogham, although roughly and irregularly executed, whilst others are of a character which precludes their classification under this heading.

Some of the so-called 'cup-markings' on sepulchral monuments have been caused by the action of Nature, being the well-known 'ripple marks' common in the old red-sandstone series; but anyone familiar with geological formations would not confound the artificial with the natural work, though depressions—very like genuine 'cup-markings'—are created on the upper surface of calcareous rocks by the solvent action of rain-water; but even ignoring the undoubted traces of the pick or pointed instrument occurring on some of the 'cup-markings,' it is impossible to suppose that the concentric or spiral rings, which frequently surround the 'cups,' could be the result of geological causes.

'We shall, I think,' remarks H. M. Westropp, who advances a very simple theory as to their formation, 'be led to a more just conclusion as to their origin, if we bring before our mind that the savage and primitive man has the same fondness for imitation, the same love of laborious idleness as the child. A child will pass hours whittling and paring a stick, building a diminutive house or wall, and tracing forms on the turf. The savage will wear away years in carving his war-club and polishing his stone-adze. These considerations lead me to attribute these carvings and sculpture to the laborious idleness of a pastoral people, passing the long and weary day in tending their flocks and herds; they amused themselves by carving and cutting those various figures, and the rude outlines of primitive men, in various countries, like the rude attempts at drawing by children, cannot but bear a family resemblance to one another, their utter absence of art being frequently their chief point of relationship.'*

* *Proceedings, Royal Irish Academy*, vol. x., p. 233.

W. F. Wakeman thus depicts another aspect in which these rock carvings may be regarded:—'Many men of ancient and modern times, confined by necessity to a listless existence, in an inhospitable region, might very naturally have beguiled their hours by carving with a stone, or metallic instrument—such figures as their fancy prompted—upon the nearest object which happened to present a surface more or less smooth. Scorings or designs made under such circumstances, would be, in character, as various as the skill or humours of their authors. Now, when in many districts of the country, and some of them widely apart, we find upon the sides of caves and rocks, and within the enclosure of Pagan sepulchral tumuli, a certain well-defined class of engravings, often arranged in groups, and with few exceptions, presenting what may be styled a family type, we can hardly imagine them to be the result of caprice.'

As a proof of the caution requisite before attaching importance to such objects, an incident observed, when the mania amongst British archæologists about cup-markings was at its height, deserves to be recorded.

An Irish archæologist chanced to walk towards the Mumbles, near Oystermouth, South Wales, where quarrying operations were being carried on. The stone was in vertical strata, and as each layer was removed, the face of the next exhibited cupped depressions irregularly distributed over the surface, and in considerable numbers. Mr. Brash immediately recognized as a fact that which he had previously surmised, namely, that three-fourths of the 'cup-markings' that had been occupying the attention of learned societies, and filling the pages of their publications, had no

archæological significance whatever, and were merely freaks of nature!

We may all recollect in Scott's most amusing novel of 'The Antiquary,' the scene between Oldbuck and Edie Ochiltree relative to the supposed Roman entrenchment. The Scottish example is, however, quite paralleled by the controversy relative to the meaning of an inscription carved on a rock situated on the summit of Tory Hill, near Mullinavat, Co. Kilkenny, and which Tighe, in his *Statistical Observations*, relative to Kilkenny, interprets as a Phœnician inscription, and reads it BELI DINOSE. Vallency and Wood copied this Tory Hill inscription, and employed it as the sole basis of their theory respecting the Phœnician origin of the early colonization of Ireland; even Lanigan gravely cites this monument as one among many ancient remains in Ireland, which serve to show that their God Bel was identical with the Sun. Its true interpretation is here given on the authority of O'Donovan:—A millstone-cutter went one morning early to commence working at a millstone on the top of the hill; but his fellow-labourers—without whose assistance he could not well commence his work—did not join him at the appointed time, and he therefore amused himself by cutting his name (E. CONIC) and the date (1731) on the stone in question. He was so bad a scholar that he reversed—as children constantly do—one of the letters—the last C of his surname. The stone was at this time lying flat on the surface of the hill, and remained so for many years after his death. A number of *boys* repaired to the top of the hill to amuse themselves; and after several rounds of boxing and wrestling, they wished to try who was the best leaper, and finding this inscribed stone ready at hand to answer

their purpose, they raised it on others to the height required for a 'running leap'; but it happened that they placed it in such a position that the letters appeared reversed. They departed to their respective homes leaving it in this position, little imagining that they had erected an altar to any god! Shortly after this, some gentlemen happened to ascend the hill, and observing the stone, were struck with the strange appearance of the letters; and one of them, thinking that he had discovered an ancient inscription, made a sketch of the stone and the letters, in their inverted position; and having shown this sketch to some of the *literati* at Waterford, he created a celebrity for the locality which induced many to visit Tory Hill, to try and read the wonderful inscription.

Mistakes like this are laughed at; but attempts, or alleged attempts, at imposition cannot be too severely reprobated. Towards the close of the last century a writer in the *Transactions of the Royal Irish Academy* gave an account of a remarkable megalithic structure, situated on Callan Mountain, in Clare. A copy of an Ogham inscription which was cut upon it was given, with a translation, which set forth that a celebrated Irish hero, named Conan, was there buried. To support this reading, it is alleged that an Irish quatrain was forged and cited as part of an ancient poem to the effect that the above-mentioned warrior, had—before engaging in battle—prayed to the sun in this locality, that he was slain, and interred on Mount Callan, under a flagstone which bore his name carved in Ogham characters.

The great majority of irregular scorings on the faces of cliffs, or on detached boulders should be regarded with suspicion. W. F. Wakeman has pointed out that

'those which occur on the pillar-stone at Kilnasaggart, Co. Armagh—though long considered to be Ogham characters—are now universally pronounced to be nothing more than markings made by persons who utilized the menhir as a block, for the sharpening and pointing of tools and weapons. The same remark applies in full force to certain scorings and scratches which disfigure a grand dallan, standing close to the railway station of Kesh, Co. Fermanagh, on the right-hand side of the line as you face towards Bundoran. They are found abundantly on the coping-stones of the walls of Londonderry, and in other localities too numerous to mention—at Killowen, Co. Cork, they occur on a stone significantly called *Clock-na-n'arm*, or the (*sharpening*) *stone of the weapons*.'*

In the year 1860, J. P. Maginnis described incised scorings found on the walls of a natural cavern known as 'The Lettered Cave,' on Knockmore Mountain, near the village of Derrygonnely, Co. Fermanagh, some of which he imagined resembled runes, and others seem to be cognate with the incised ornamentation on the stones of the Great Chambers at New Grange; but mixed with the ancient, are many modern markings known to be the work of visitors to the cave, so that much caution is required to distinguish the genuine ancient scorings.

The rock-markings in the passages and chambers of New Grange, and Dowth, on the river Boyne, present characteristics readily distinguishing them from the rock-markings of the north of England and Scotland—one of the chief of which is, that whilst the circular incised figures which form the bulk of the latter are

* *Archæologia Hibernica*, p. 80.

concentric, with a central cup-like hollow, and a channel passing through the concentric circles, the carvings at New Grange and Dowth are, as a rule, spirals, without the central hollow or intersecting channel, and are associated with fern-leaf patterns,* and also with lozenge, zigzag and chevron-like markings, which are analogous to the ornamentation of fictile sepulchral vessels. Many of the markings of New Grange and Dowth are proved to have been carved before the stones were used for their present purpose.

If we find carvings on a natural boulder—not in any way connected with Christian use, or tradition—even should these carvings not be strictly analogous to those at New Grange, Dowth, or Loughcrew, yet we have some grounds to conclude that here is an example of a primeval custom which placed ready to the hand of the builders of these tumuli material ready carved. Now there are many such natural boulders scattered throughout the country. Several stud the surface of the green eskers, or hills, surrounding the Seven Churches of Clonmacnoise. Close to one boulder is a carn, called *Leacht-na-Marra*, or the monument of the dead; when a funeral approaches that famed burial-ground, the coffin is laid down and stones thrown on the carn. It is stated that no Christian rite was ever performed at the boulder. On the contrary, the name by which it is known—'The Fairy's Stone'—points to its pagan origin.

The most singular markings on the boulder are apparently representations of the ancient Irish ring-

* This fern-leaf pattern is now thought to be doubtful; there is no median line.

brooch; some with a knob on top of the acus—as frequently occurs in extant specimens—others being flat at top, and seeming to represent the looping of the acus over the flat bar of a half-moon ring. The carvings appear to have been formed by a rude-pointed tool or pick, and are, on an average, about an inch deep. The other boulders occurring on the hill are studded over with cup-like hollows, evidently caused by the solvent property of rain-water, retained in certain natural irregularities, which were thereby deepened and assumed the artificial aspect which they now present.

There is an incised stone near Cranna, Co. Galway, called by the peasantry 'The Stone of the Fruitful Fairy.' It is a boulder of very irregular form, measuring forty-six inches by thirty-two inches, and presents, with other ornamentation, the water-worn hollows already described.

About a quarter of a mile from Parsonstown, on the road to Dublin, there stood, many years ago, a globular-shaped limestone boulder, five or six feet in diameter, and inscribed with V-shaped marks, like the stone at Cranna, Co. Galway, and other places; also various depressions or cavities, traditionally said to be the marks of Finn Mac Cumhaill's thumb and fingers. It was called Seefin, *i. e.* Finn's Seat. This stone was removed from its ancient site on a truck to Tulla, Co. Clare.

The giants left marks of their fingers and of their feet on rocks. The saints did the same. Two examples will suffice. In the townland of Bellanascaddan, in the Co. Donegal, there is a monolith on which are two cup-marks. To account for these the country people narrate that a giant, who lived in a neighbour-

ing fort, used it as his 'finger-stone,' and that the cups on the stone are the marks of his fingers. Within the demesne of Sheestown (in Ossory) there exists a rock, marked with peculiar indentations, which were believed by the people to have been traces or marks of St. Patrick's footsteps. The rock was called 'Ciscaem Padruig,' *i.e.* St. Patrick's footsteps.

R. R. Brash mentions an 'inscribed cromlech,' called 'The Baalic,' in the townland of Scrahanard, which stands on the side of a hill, about three miles west of Macroom, Co. Cork. On the underside of the table-stone were a series of artificial marks, covering the surface, and consisting of lines—straight and oblique—numerous crosses, or lines intersecting at right angles, and other curious forms ; but they never could—according to Mr. Brash—'have been designed to convey a meaning, much less a meaning to be arrived at through the medium of phonetic exponents. They were evidently the arbitrary whims of a rude race, and must have been executed before the stone was placed in its present position.'

In the year 1864, G. V. Du Noyer was fortunate enough to light on a good example of carvings on an inclined bed of rock, near the summit of Ryefield Hill, in the townland of Ballydorragh, Co. Cavan. The markings are described as produced, apparently by simple scraping with a saw-like motion ; some may have been formed by a metallic implement. The figures most commonly represented are detached straight-armed crosses, but not unfrequently these are so grouped or clustered together as to form a network of lines crossing in every direction ; in two instances these crosses are inclosed in an oblong rectangular figure. About a quarter of a mile north-west of 'Calliagh

Dirra's House,' in the parish of Monasterboice, the same explorer discovered rock-markings—produced by a combined method of scraping and punching—on a natural rock-surface. Some of the devices differ from those at Ryefield, for many are of quite a Runic character. This may be accidental, just as some of the carving on rocks in Sweden closely resemble a pair of spectacles; yet no one could imagine that they had such a significance, though they possibly may be typical of the human face! *

In 1868 Mr. Robert Day recorded† the discovery of a scribed rock of the red sandstone of the district, situated near the new line of road leading from Ballydehob to Bantry, Co. Cork. When forming the road the workmen cleared away a considerable depth of earth from the face of the rock, and so exposed its sculptured surface. The designs consist of circles, cup-shaped cavities, penannular rings, and V-shaped markings; there are two perfectly-formed circles, and three imperfect or penannular circles, together with other curious markings.

Most of the early forms of decoration found on the walls of early sepulchral chambers, or on the face of natural rock, are repeated on funeral fictilia, on bronze hatchets, and on ornaments of gold.

As a rule the attempts at art by Early Man were confined to rude lineal decorative patterns, an exception being the extraordinary and life-like representations by the cave-men of Gaul, who incised on bone, delineations of mastodons, reindeer, horses, and fishes. A suspicion may be entertained that these articles are possibly for-

* *Journal, Kilkenny Archæological Society*, vol. v., pp. 497–501.

† *Journal, Royal Historical and Archæological Association of Ireland*, vol. i. (ser. iii.), pp. 91, 92.

geries. Why should such astonishing and faithful animal-designers be confined to one small district? Nowhere else have traces of such skilled artists been unearthed. Perhaps in the dim future some enthusiastic Irish cave-explorer may bring to light an etching on bone, or stone, similar to those discovered on the Continent; but until that day arrives we must rest content with the singular fact that the sculptor's art, as applied to representations of the human or animal form, appears to have been rarely, if ever, practised in Ireland prior to the introduction of Christianity. Even then the devices consisted almost entirely in ornamentation of an arabesque character, sometimes combined with grotesque animals and serpents; if human figures were introduced they were subsidiary to the scroll-work in which they were entwined.

From the tenacity with which the Pagan-Christian School of artists adhered to an almost stereotyped form of decoration it is difficult to assign even an approximate date to many of the best specimens of elaborately-decorated remains. It may be, however, fairly surmised that any object of Irish art upon which interlacing tracery is displayed should not be referred to a period antecedent to Christianity.

CHAPTER III.

EARLY HISTORY.

TIGHERNACH, the most reliable of early Irish scribes, died about A.D. 1088, and if he be accepted as an authority, Irish history might be considered to open about two centuries before Christ; his words, 'omnia monumenta Scotorum usque Cimbeath incerta erant,' must, as O'Donovan remarks, inspire a feeling of confidence in the writer.

According to Tighernach the starting point of Irish history was the erection of the palace of Emania. A wild legend states its origin to be as follows:—Three kings who had been fighting amongst themselves finally agreed to reign for seven years—in alternate succession. They had each enjoyed the sovereignty for one of these periods, when the first king died, and his daughter claimed the right to reign when her father's term of sovereignty came round; she was opposed, but vanquished all opposition. Her subjects suggested that she should put her prisoners to death; this she refused to do, but condemned them to slavery, and employed them in building a huge rath or fortress, and 'she marked for them the dun with her brooch of gold from her neck,' so that the palace was called *Eomuin*, from *eo*, a brooch, and *muin*, the neck.

The early history of Ireland—whether given by ancient or modern writers—is a strange mixture of truth,

exaggeration, allegory, and downright fiction; however, the fact of incredible exploits being ascribed to dim historic personages is not sufficient ground for denying the existence of those individuals. In the early history of almost every country, the appearance of mythical beings is reported, and formerly it was usual to deny the existence of such, but present-day historians rather incline to the opinion that these may have been real individuals who were remarkable for some great quality, or for heroic deeds, and around whom tradition gradually wove an accumulation of supernatural glory.

The statements presented by many writers as true history are, as remarked by O'Donovan, 'after all no more than their own inferences drawn, in many instances, from the half historical, half fabulous works of the ancients. In the middle ages no story was acceptable to the taste of the day without the assistance of some marvellous or miraculous incidents, which, in those all-believing times, formed the life and soul of every narrative.'

There is a strange kind of excitement in essaying to unravel a complicated problem, and certainly ample room is afforded to a student desirous of analysing and investigating the so-called history and description of ancient Erin, which has been handed down to us and repeated by writer after writer. The mythical stories by Geoffrey of Monmouth, and other scribes of that school, relative to the colonization and history of England, have long been consigned to the literary waste-paper basket; and why should the extravagant legends related of Ireland be treated with more leniency? To transmit, by oral tradition, a chain of events, extending back in an unbroken order to the Creation, would be an impossibility; we possess also

good authority for not giving 'heed to fables and endless genealogies,' or to 'profane and old wives' fables!' Writers of the olden school usually commenced histories with fables, the length and extravagance of which was in proportion to their estimate of the importance of the theme; and nothing has tended so much to bring discredit on the proper study of Irish history and Irish antiquities as this exaggeration.

Beranger, towards the close of the last century, wrote on this subject; and, as remarked by Wilde, one would imagine that the cautious old Dutchman had been inditing a prospectus for the origination of an Archæological Society:—'No traces remain of the grandeur of the ancient Irish—which we are pressed to believe without proofs—except some manuscripts which very few can read, and out of which the Irish historian picks what suits him, and hides what is fabulous and absurd.'

No statement will be here advanced merely on the authority of native annals and manuscripts, unless corroborated by outside and disinterested evidence such as is afforded by classic or foreign writers, or the archæological and material evidences of sepulchral remains, dwellings, implements, ornaments, and other traces, left by the primitive inhabitants. If material objects be accepted as proofs of the pagan ideas and customs of the aborigines, surely the evidence of still existent superstitious observances of the peasantry, which can be traced to a pre-Christian source, ought to be received with, at least, the same authority; and we should look upon all these subjects as mere links in one great chain which binds together many separate periods of semi-culture.

It is to be hoped that research into the past, on these

lines, may contribute to the re-construction of early history—a work which can only be finally accomplished by many united efforts.

Evidence of the steady growth of a healthy current of archæological thought is apparent to the most careless observer; yet we have made but little progress in higher and scientific archæology; and the ancient antiquities of Ireland still remain in an unclassified condition. For a lengthened period archæology was not recognized as a science, although it treats of the arts, manners, customs, and entire past of primitive man, whilst now-a-days it must be acknowledged as an able assistant to ethnology and philology. It is evident that philology, as a guide, must give place to, or rest its evidence on, the material proofs produced by archæology or ethnology. Indeed, a student, seeking to discover the origin of a people through analysis of the spoken language, may be led to conclusions of the most erroneous description. For instance, in Ireland, a stranger, ignorant of its early history, and finding the vast majority of the population speaking English, might come to the conclusion that they were of English descent. Until a comparatively recent period Irish archæology was in a deplorable state: travellers along the road to antiquarian knowledge were beguiled at every step from the true track by false guides who, like 'Will-o'-the-wisp,' led them aimlessly about; yet 'Vallancey, Ledwich, Beauford, Betham, and others, whom we have been taught to sneer at,' remarks Wilde, 'must be tried, like other men in similar circumstances, according to the light of their times; and while we laugh at their arguments, deductions, and assumption of learning, we must acknowledge that we are indebted to them for many facts that might

otherwise have fallen through the sieve on which both grain and chaff were presented.'

Petrie's Essay on the origin of Irish round-towers—a model for archæological writers—created a literary revolution. To the overthrow of romantic theories and fanciful speculations, he marshalled solid arguments and a bristling array of facts, and conclusively proved that the round towers of Ireland, instead of being Pagan temples of the remotest antiquity, were erected by ecclesiastics, perhaps for belfries, but especially for keeps or places of protection against sudden attacks. As is the case with too many other Irish writers, the amount of published matter which Petrie has left represents most inadequately his great knowledge of archæology.

The present school of archæology is pre-eminently that of the spade; the spade is a great solver of problems, and destroyer of fantastical theories; it must ultimately unfold in its entirety primitive man's ideas regarding the dead, of the future state, of burial customs, ceremonials, and institutions to which they gave rise; it is precisely at this early stage that the spade has much to tell, for where historical and legendary traditions are absent, the ultimate appeal must be to it.

The mass of literature which has appeared on the subject of the name and meaning of the ancient designation of Ireland would fill a goodly sized volume. In some of the earliest manuscripts, the name is written Eriu, and one legend, which appears to bear the impress of truthfulness, alleges, that, at some period, either prior to, or after, the deluge, Ireland was discovered by fishermen who had been blown out to sea in their skiff; this was at least a natural and not improbable manner of discovering a new island.

Whether Ireland was known to the Phœnicians is a subject of controversy amongst antiquarians. Even had these energetic traders been acquainted with the island, it is more than probable that they would have tried to conceal their knowledge—as they were unwilling to allow other maritime nations to discover the sources from which they drew their riches. We have the well-known and hackneyed story of the wily Phœnician ship-master who, observing that, on his voyage to Britain, he was followed by a Roman galley which watched his course, voluntarily ran his vessel on a shoal, on which his pursuer also struck. The Phœnician, who was either a better, or more fortunate seaman, floated off his craft, but the Roman galley went to pieces.

The earliest writers of Greece and Rome who are supposed to refer to Ireland, have spoken of it in a manner so vague, that very little can be learnt from their words; even if Ireland may be identified as Thule, as the 'Sacred Island,' or the poetic 'Island of the Blest,' in which the golden age of innocence and purity still continued to flourish after all the rest of the world had become corrupt: but these verses from Claudian are conclusive as to the designation of Thule—at any rate in the poet's time—not being applicable to Ireland:—'The Orkney's dripped (with blood) when the Saxons were put to flight; Thule grew warm with the gore of the Picts; icy Ireland bewailed the heaps of (slain) Scoti.'

Rufus Festus Avienus, a poetical writer of the fourth century, A.D., professes to have derived his information from a Carthaginian source; and he is, it is alleged, the only ancient author as yet known, who specially applied the epithet of 'The Sacred Island' to Ireland. His account is curious; he states that at a distance of two

days' sail from the Æstrymnides, lay an extensive island called the Sacred Island, inhabited by the nation of the Hibernians. The legend of an 'Isle of the Blessed,' or of a submerged continent, is still preserved in the folk-lore of almost every European nation. O'Flaherty states that the island of Hy-Brassil—marked on many old charts—was in his time, 'often visible.' The subject has inspired several poets with beautiful fancies which have been woven into pathetic ballads. Many attempts were made to discover this fabled island. Leslie, of Glaslough, described as 'a wise man and a great scholar,' was so imbued with the belief in its real existence as to take out a grant of the isle from Charles I. Edmond Ludlow, the celebrated republican, escaped to the Continent, in a vessel chartered at Limerick, to sail in search of Hy-Brassil; and so firm was the belief in the actual existence of this enchanted island, that the captain of the ship was allowed to depart unquestioned. A pamphlet, purporting to give an account of the discovery of Hy-Brassil, obtained circulation in London in 1675. The existence of a land which would restore the aged to the full vigour of youth was of world-wide belief, but all attempts to discover this land necessarily ended in disappointment. Nevertheless, the strange spirit of adventure thus engendered, laid open to view countries which might otherwise have remained for centuries unknown.

A country of indefinite magnitude, called the island of Brassil, is marked on numerous maps made before, and about the time of Columbus. It is represented south of another island which, it is thought, represents the supposed position of the Scandinavian settlements of Vineland, for, although we designate the American

continent the New World, it was apparently known to these ancient rovers of the sea.

O'Flaherty, writing in 1684, states that: 'From the Isles of Aran and the west continent, often appears visible that enchanted island called O'Brasil, and in Irish Beg-ara, or the Lesser Aran, set down in cards of navigation: whether it be reall and firm land, kept hidden by speciall ordinance of God, as the terrestiall paradise, or else some illusion of airy clouds appearing on the surface of the sea, or the craft of evill spirits—is more than our judgements can sound out.'

Belief in the existence of the island of Hy-Brassil may have arisen through optical illusions, which are not so very infrequent as is generally supposed. A correspondent writes: 'I myself, upwards of half a century ago, saw a wonderful mirage, resembling that lately described as having been visible off our Tireragh coast; and had I been looking on the bay for the first time, nothing could have persuaded me but that I was gazing at a veritable city—a large handsome one, too—trees, houses, spires, castellated buildings,' &c.

The accord of Classic and Irish tradition is remarkable; in both cases, somewhere far away in the western ocean, there was a spiritual country which passed under various names; and that this was one of the Elysiums of the primitive Irish, as well as of classic writers, is very clear. It appears to have corresponded to the 'Land of the Saints' of early Irish Christianity, where the souls of the Blessed awaited the Day of Judgment, even as the 'Land of the Living' was, to the Pagan Irish, their happy 'Spirit Home.' The general traditions of pagan peoples place the point of departure from this world, and entrance to the next, always to the west, and the journey lay westward.

The poet Longfellow makes even his Indian hero, Hiawatha, take his departure westward into the fiery sunset—

> 'To the Island of the Blessed,
> To the Kingdom of Ponemah,
> To the land of the Hereafter.'

Onamacritus, in a romantic Greek poem on Jason's Colchian Expedition, takes his heroes over almost every part of the then known world, and in the course of their adventures in the Atlantic, they pass an island named Ierne. The passage, however, in Aristotle (B.C. 384–322), in which he noticed the island of Ierne, bears, it is alleged, 'the unquestionable stamp of a much more advanced stage of geographical knowledge than that of his age.' Perhaps the earliest notice on which dependence can be placed, is that by Eratosthenes (B.C. 276–196). Most of his works have been lost: some, however, of his references to Ireland have been preserved by Strabo, who maintains that he was so well acquainted with the western parts of Europe that he had determined the distance of Ireland from Gaul. Strabo (born B.C. 70) in describing the extent of the habitable world, considered that it commenced to the north of the mouth of the Borysthenes. This parallel, at the other extremity, passed to the north of Ierne. Little was known of its inhabitants; they were reputed to be mere savages, addicted to cannibalism, and having no marriage ties. Solinus—who is mentioned by Servius, Macrobius, and Priscianus, as well as by Jerome, Ambrose, and Augustin—enters into more details than any previous geographer. He wrote before the birth of our Lord:—

'Hibernia approaches to Britain in size; it is inhuman in the rough manners of its inhabitants; it is so luxuriant in its grass

that, unless its cattle are now and again removed from their pasturage, satiety may cause danger to them. There is there no snake, and few birds—an inhospitable and warlike nation, the conquerors among whom, having first drunk the blood of their enemies, afterwards besmear their faces therewith: they regard right and wrong alike. Whenever a woman brings forth a male child, she puts his first food on the sword of her husband, and she lightly introduces the first 'auspicium' of nourishment into his little mouth with the point of the sword; and with gentle vows she expresses a wish that he may never meet death otherwise than in war and amid wars. Those who attend to military costume ornament the hilts of their swords with the teeth of sea-monsters, which are as white as ivory, for the men glory in their weapons. No bee has been brought thither, and if anyone scatters dust or pebbles brought from thence among the hives in other countries, the swarms desert their combs. The sea that lies between this island and Britain is stormy and tempestuous during the whole year, nor is it navigable, except for a few days in the summer season. They sail in wicker-vessels, which they cover all round with ox-hides, and as long as the voyage continues the navigators abstain from food. The breadth of the island is uncertain; that it extends twenty miles is the opinion of those who have calculated nearest the truth.'

The story about the bees and the supposed breadth of Ireland excepted, Solinus is comparatively free from errors in this brief description, for it can readily be imagined that, to the coracle-voyaging native, the Irish Channel might well be regarded as 'stormy and tempestuous during the whole year.' Pomponius Mela, who flourished in the reign of the Emperor Claudius (A.D. 41–54), appears to have extracted some of his information from Solinus, but he corrects his errors relative to the size of the island:—'Beyond Britain lies Juverna, an island of nearly equal size, but oblong, with a coast at each side of equal extent, having a climate unfavourable for ripening grain, but so luxuriant in grasses, not merely palatable but even sweet, that the cattle in a very short time take sufficient

feeding for the day, and if allowed to feed too long, they would burst. Its inhabitants are wanting in every virtue, and totally destitute of piety.' Pliny, who wrote about the same time as Pomponius Mela, states that Ireland was about the same breadth as Britain but two hundred miles shorter, and that it was distant thirty miles from the territory of the Silures. Diodorus, who lived in the reigns of Augustus and Tiberius, writes that the most ferocious of the Northern Gauls were stated to be 'cannibals like the Britons who inhabit Erin.'

From an allusion in Pliny, it has been surmised that the Romans possessed a map or topography of Ireland. After their conquest of Britain, Ireland became better known to them; intercourse of a more or less restricted character must have sprung up, for commerce, in olden days, 'was the parent of geography.' Tacitus, in his life of Agricola, specially states that Ireland possessed a commerce superior to that of Britain, and that its harbours and estuaries were more frequented and better known to traders; also that there was very little difference between the soil and climate, the religious worship and dispositions of the inhabitants of Ireland and those of Britain.

Claudius Ptolemy, who, in the second century, compiled his work on geography, which remained a standard text-book until the fifteenth century, is the only early writer who has described the ports and inland places in Ireland with any exactitude. He essayed to systematize the result of ancient research, and although at first sight his map may appear grotesque, yet if the feeble appliances which he had at his disposal be considered, the ingenuity displayed in overcoming their deficiencies should excite admiration. His information consists

essentially of a table of latitudes and longitudes, and he evidently intended it to serve as a sufficient guide for the construction of a map, without referring to any existing charts. Ireland, in Ptolemaic geography, is placed too much to the north, while Scotland has been made to tend towards the east instead of to the north. The map is not far wrong as regards the length and breadth of the island, but the former runs north-east and south-west instead of north and south, whilst the outlines of the coast depart in places so far from the reality as to render the identification of many of the headlands very problematic. Had Ireland, however, been placed in its proper position, and Scotland given the proper direction, the approximate outline of Great Britain and Ireland would have been fairly represented; and this bears out the hypothesis that Ptolemy's information was drawn from three separate maps which afforded to him no guide as to their mutual relations.

It is strange that the designation Ivernia, as Ptolemy styled Ireland, differs more widely than that of Ierne, by which the island was first known to the Greeks, from the native name Erin.

The eastern coast must have been the one best known to foreign merchants sailing for the port of Dublin, which even at this period appears to have been a place of importance. The first headland sighted would be Howth, of which the ancient Irish name was Ben-Edair. Opposite the town of Eblana, there is marked on Ptolemy's map an uninhabited island styled Edrus; and connected as Howth, *i. e.* Ben-Edair, is to the mainland by low-lying ground, it is no wonder that the geographer's informants mistook Ben-Edair for an island. Another adjoining island, Limnus, may

be Lambay, whilst Eblana is clearly Dublin (with the *d* softened or omitted).

To the south of this city there appears a river styled the Aboca, which points to its being the river Avonmore (Avon = Aboca) in Wicklow; but not contented with its identification, the stream has been styled the Avoca.* The river Bovinda, to the north of Dublin, is clearly the Boyne; the Vinderius, from its position, appears to be Strangford Lough; whilst the Logia may be identified with the river Lagan at Belfast.

The shape of the northern coast of Ireland is the one most accurately represented, and its localities the most easily recognisable. Robogdium appears to be Fair Head; the river Argita, the Bann; the Vidua, the Foyle; Vennicuum, Malin Head; and the Northern Cape may be the Bloody Foreland.

On the west coast the identification of localities is surrounded with greater difficulties. The river Ravius† may be the Erne; the Libnius the river of Sligo, and

* Ptolemy places a town, called Dounon, on or near the river Oboca. The locality has not been identified, but the name is evidently derived from the Celtic designation of a fortress, i. e. *doun*, with the Greek inflexion *on* added to it.

† O'Donovan, in one of his letters, alludes to the names of Irish rivers, and the following extract is given, not alone as bearing upon the identification of ancient names, but as showing in what light this celebrated Irish scholar regarded some of the old Irish writers:—

'There is an old poem, preserved in several MSS., which states that there were ten rivers in Ireland at Parthalon's arrival. . . . Now, though we know that this poem is undoubtedly a fabrication, still it is very ancient; while, therefore, we reject that absurd part which would give us to understand that the river Liffey is more ancient than the Shannon, we retain it as the testimony of an Irish bard, that such were the names of ten considerable and well-known rivers in Ireland at the time he flourished.'

Having quoted the Irish poem O'Donovan continues:—

'*Laoi*, *Buas*, *Banna*, *Bearbha*, *Saimer*, *Sligeach*, *Modhorn*, *Muadh*, *Fionn*, *Liffe* were the names of ten considerable and well-

Nagnata, either Sligo or Drumcliff; the Ausiba, the river Moy; the Senus corresponds in name with the Shannon; whilst the Southern Cape is doubtless one of the headlands of Kerry.

On the southern coast the localities are quite as clearly defined as on the northern. The Dabrona answers in position to the Blackwater; the Birgus, both in position and name, to the Barrow; whilst the Sacred Cape appears to be Carnsore Point.

The names, as given by Ptolemy, of the towns situated in the interior of the country, as well as his enumeration of tribal territories, need not be noticed, as they have not been identified, at least with any unanimous assent. Places situated far inland, and never probably visited by foreign traffickers, would be by them pronounced in a more incorrect form than those at which they had landed. This would fully account for the fairly successful identification of localities along the littoral. But with regard to this identification it

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known rivers in Ireland at the time that the author of the poem—beginning Ⲁⲇⲁⲙ̇, ⲁⲥ̇ⲁⲓⲣ, ⲅⲣⲩⲥ̇ ⲁ́ⲣ ⲅⲗⲩⲁⲝ̇, 'Adam, father and source of our race,' either fabricated this story, or drew it from other historic monuments then existing, or founded it upon foolish traditions, the like of which are to be found among every nation, and upon which the commencement of the history of most nations is founded.

'Let us trace where these rivers are situated, and by what names they are now known.

'*Laoi* is a river in the county Cork—anglicized *Lee*, and well known by that name to the natives at the present day. *Banna* and *Bearbha* are also known by these names to those who speak the Irish language at this day; they are anglicized *Bann* and *Barrow*. *Saimer* is now called the *Erne*, as O'Flaherty testifies. *Sligeach*, *Modhom*, *Muadh* are also known by those names at this day; they are anglicized the *Sligo*, *Mourne*, and *Moy*. *Fionn* is now properly anglicized *Fin*; it is a river in the county of Donegal, which pays its tribute to the river Foyle. *Liffe* is now called *Liffey*; it was the boundary between Magh Breágh (Moybrà) and Hy Kinsellagh. The river *Buas* alone remains doubtful.'

must be admitted that the conclusions of recent authorities of eminence are by no means unanimous.* The information collected and tabulated by Ptolemy was probably known, before his time, to traders belonging to, or frequenting, the western coasts of Caledonia and of Britain; yet it is strange that no mention is made of Tara. It is alleged that all vestiges of buildings or earthworks now or formerly existing on the Hill of Tara may be classed under two distinct periods, both being within the limits of the Christian era. The most important period, and that to which it is alleged all the remains now observable belong, is in the third century. From this it has been concluded that, before that date, Tara was not distinguished as a regal seat or city, and hence its omission from the map of Ptolemy.

From vestiges of ancient remains at Tara it would appear that the original structures were altogether composed of earth and wood, and, from their uniform character, they were probably erected at about the same time and by the same people.

In the year A.D. 82 Agricola encamped on a portion of the Scottish littoral which faced Ireland. He appears to have entertained the idea of the conquest of Ireland, on account of its supposed strategic importance; for the Romans, according to Tacitus, erroneously considered it to be equidistant from Britain, Gaul, and Spain. It was therefore important as a connecting link in the consolidation of these provinces; but Agricola was unable to bring his plans to maturity, owing to an invasion of the northern tribes, which compelled him to turn his arms in a different direction. A few writers go so far as to assert that the Romans, profiting by the

* *Archæologia*, vol. xl., pp. 377–396.

after-tranquillity in Britain, crossed the Channel and subdued Ireland in part. It appears as if the statement of this alleged conquest were based upon a claim of nominal sovereignty, perhaps through the submission of some fugitive Irish chieftain such as the politic Agricola kept in his camp, as well as on a passage in one of Juvenal's satires, written about A.D. 97, wherein the Poet describes the conquests of his countrymen :— 'We have indeed carried our arms beyond the shores of Ireland, and the lately subdued Orkneys and the Britons contented with a short night.' Juvenal speaks, however, not of the conquest of Ireland, but of the manner in which the Roman Eagles were pushed beyond Ireland northward, into the island regions where, in summer, the night time was of comparatively short duration. There is at any rate no notice of such an expedition in any classic writer, nor has proof of their occupation of the country ever been brought to light. The discovery of Roman coins in Ireland is exceptional, although found in abundance in Britain, more especially in the vicinity of the sites of Roman towns and military stations. The only really important find was made near Coleraine ; it consisted of 2000 silver coins and 200 ounces of silver fragments and ingots stamped with the names of Roman mint-masters. The money presented specimens of coinage from A.D. 363 to 410, so that it must have been committed to the earth after that date, probably about the time of the evacuation of Britain by the Romans. From the character of this treasure it would appear to have been a forgotten deposit of some Irish freebooters. The poet Claudian thus extols the success of Stilicho in repelling the conjoint Irish and Caledonian attacks on the Roman settlements in Britain :—' By him,' says the poet, speaking in the

person of Britannia, 'was I protected when the Scot moved all Ierne against me, and the sea foamed with hostile oars'; and again: 'nor did he, under a false name, conquer the Picts, and having followed the Scoti (Irish) with his roving sword, he cleft the northern waves with daring oars.'

The other Roman antiques which have been found from time to time are few in number and of an unimportant character, such as might have been the result of traffic with the Romans. In the same way, the discovery of small hoards of Saxon coins is of by no means rare occurrence, being the result of traffic, or of marauding expeditions to the English coast.

The fact of the discovery of a Roman coin is of little importance in itself. A single coin might be accidentally dropped and lost by some collector, but large deposits cannot thus be accounted for; probably in times of turbulence they may have been placed for safety where they were afterwards discovered. About the year 1835 workmen employed on the north side of Bray Head met with several human skeletons, placed in graves side by side, and one or more Roman copper coins lay on, or beside the breast of each skeleton. Of these coins, some bore the image and superscription of Adrian, and others those of Trajan; several of them were greatly corroded, and altogether illegible.

As the Romans never, it is believed, formed a settlement in Ireland, the question arises, how came the coins found in this locality, and under such circumstances? The bodies were probably portion of the crew of a Roman galley lost on the shores of Wicklow. Some of the survivors performed the funeral rites of their shipmates, for amongst the Romans it was deemed an act of great impiety to leave a corpse unburied. The

coins, it is presumed, were the fee designed for the grim ferryman, as the shades of those who had not the proper toll (as well as those whose bodies remained unburied) were condemned to wander a hundred years on the banks of the Styx.

It is a curious fact that small coins are even yet, in some localities, cast into the new-made grave when the coffin is lowered. In the year 1870, at the funeral of a fisherman from the Isle of Skye, buried in the cemetery of the old Collegiate Church at Howth, his countrymen carried out this custom.

The following quaint proverb is a relic of paganism, analogous to the Roman custom of placing a small coin in the mouth of the corpse to pay Charon his toll:—

Cha deachaidh aon fhear a réamh go h-Ifrionne gan sé phighiridh air faghail bháis dó, *i. e.* no man ever went to hell without sixpence at the time of his death.

When we consider the various modes in which Roman coins may have found their way into Ireland, the wonder is not that so many, but that so few have been discovered.

Although the Romans made no settlements, yet, in early Christian times, many of them came to Ireland, and they have left their impress in local names still in existence; all these, however, are probably of ecclesiastical origin.

Orosius, who wrote about the year A.D. 410, states that Ireland surpassed Britain, both in climate and fertility, and he describes it as inhabited by the Scots. The designation of Scoti does not appear in any form as a tribal name on Ptolemy's map; and it is alleged that it is not mentioned by any writer, as a mere tribal name, until the close of the third century. If a

conclusion can be drawn from St. Patrick's authenticated writings, the designation was confined to the ruling class, and the bulk of the people were styled Hiberionaces.

There can be little doubt that there existed two or three Patricks whose lives have been worked into a strange *olla-podrida*. What description of religion or religious systems they overthrew it is difficult to ascertain with any certainty; however, two references may be cited, one by Tacitus, and the other in St. Patrick's (or one of the St. Patricks) own words.

Tacitus, in his life of Agricola, says that there was very little difference between the religious worship and dispositions of the inhabitants of Ireland and those of Britain. Caesar states that the institution of the Druids in Gaul 'is supposed to have come originally from Britain, whence it passed into Gaul; and even at this day, such as are desirous of being perfect in it, travel thither (*i. e.* to Britain) for instruction.' Thus we arrive at an approximate idea of the religious opinions of the Irish some centuries or so before the introduction of Christianity, and the heathen cult could have changed but little in the interval. The Druids (so Caesar states) taught the doctrine of the immortality of the soul, and of the metempsychosis; and they offered various kinds of sacrifices to the Gods, whom the Roman General clothes unfortunately in Classic names. They worshipped Mercury as the chief God, the inventor of all the arts, and the promoter of mercantile affairs; next came Apollo, who cured diseases; Mars presided over war, and to him was offered what they took by arms. 'To this last, when they resolve upon a battle, they commonly devote the spoil.' Jupiter was the ruler of the Gods; Minerva presided

over art; and, according to Caesar, the Druids taught the people pretty much the same notions about the attributes of the Gods as were prevalent amongst other nations at the time.

It is best to give verbatim Caesar's account of the power of the Druids, and the manner in which they imparted instruction; this will make clear how great was the power claimed and exercised by this pagan priesthood:—

'The Druids preside in matters of religion, have the care of public and private sacrifices, and interpret the will of the gods. They have the direction and education of the youth, by whom they are held in great honour. In almost all controversies, whether public or private, the decision is left to them; and if any crime is committed, any murder perpetrated, if any dispute arises touching an inheritance, or the limits of adjoining estates, in all such cases they are the supreme judges. They decree rewards and punishments; and if anyone refuses to submit to their sentence, whether magistrate or private man, they interdict him the sacrifices. This is the greatest punishment that can be inflicted among the Gauls, because such as are under this prohibition are considered as impious and wicked; all men shun them, and decline their conversation and fellowship lest they should suffer from the contagion of their misfortunes. They can neither have recourse to the law for justice, nor are capable of any public office. The Druids are all under one chief, who possesses the supreme authority in that body. Upon his death, if anyone remarkably excels the rest, he succeeds; but if there are several candidates of equal merit, the affair is determined by plurality of suffrages. Sometimes they even have recourse to arms before the election can be

brought to an issue. . . . The Druids never go to war, are exempted from taxes and military services, and enjoy all manner of immunities. These mighty encouragements induce multitudes, of their own accord, to follow that profession; and many are sent by their parents and relations. They are taught to repeat a great many verses by heart, and often spend twenty years upon this institution; for it is unlawful to commit their statutes to writing; though in other matters, whether public or private, they make use of Greek characters. They seem to follow this method for two reasons: (1) to hide their mysteries from the knowledge of the vulgar; and (2) to exercise the memory of their scholars, which would be apt to lie neglected had they letters to trust to, as we find is often the case. . . . They teach likewise many things relating to the stars and their motions, the magnitude of the world and our earth; the nature of things, and the power and prerogatives of the immortal Gods. . . .

'In threatening distempers and the imminent dangers of war, they make no scruple to sacrifice men, or engage themselves by vow to such sacrifices, in which they make use of the ministry of the Druids; for it is a prevalent opinion among them that nothing but the life of a man can atone for the life of a man, insomuch that they have established even public sacrifices of this kind. Some prepare huge Colossuses of osier-twigs, into which they put men alive, and setting fire to them, those within expire amidst the flames. They prefer for victims such as have been convicted of theft, robbery, or other crimes, believing them the most acceptable to the Gods; but when real criminals are wanting, the innocent are often made to suffer.'

'The old Celtic word for a Druid is *drui* (*dree*), which takes a *d* in the end of its oblique cases (gen., *druad*); the Greeks and Latins borrowed this word from the Celts, and through them it has found its way into English in the form *druid*. Notwithstanding the long lapse of time since the extinction of druidism, the word *drui* is still a living word in the Irish language. Even in some places where the language is lost the word is remembered; for I,' remarks Dr. Joyce, 'have repeatedly heard the English-speaking people of the south apply the term *shoundhree* (*sean-drui*, old druid) to any crabbed, cunning, old-fashioned looking fellow.'*

The term 'Druid' is perpetuated in the names of several localities. Loughnashandree, the lake of the old Druids, lies near the head of the harbour of Ardgroom; the ancient name of Red Hill near Skreen, county Sligo, was Knocknadrooa, the hill of the Druids. A well not far from the village of Freshford, county Kilkenny, is styled Tobernadree, the well of the Druids. A lake three miles west of Lough Derg in Donegal, Loughnadrooa, signifies the lake of the Druids. In the parish of Clogherny, in Tyrone, there is a townland called Killadroy, the Druids' wood. A point of land in the Island of Achill is named Gobnadruy, the Druids' point; whilst Derrydruel, near Dunglow, in Donegal, means the Druids' oak-wood.

There is comparatively little trace of the religion of the Druids now discoverable, and the references relative to it that occur in ancient and authentic Irish manuscripts are meagre and totally insufficient to support anything like a sound theory for full development of the ancient religion. However, if careful

* *Irish Names of Places*, Second Series, p. 96.

examination be made of all the traditions bearing on this subject, and they be compared with the strange customs, still in many places prevalent, much light may be thrown upon the, at present, incomprehensible passages in Irish manuscripts, as also upon early Irish history in all its branches. We must therefore, of necessity, return to the references to Druidism in classic writers, and the inquiry, after wandering in different channels, returns for solution to the apparently simple, yet really difficult, problem—was Irish Druidism the same as that of Gaul and Britain, and are we entitled to apply to it the description of Caesar and others? The peculiar character of the Druidic Church precluded the existence of any very abnormal difference in the Druidism of Gaul, Britain, and Erin; nay, further, if we assume, as Caesar states, that Druidism not only had its origin, but even its chief seat in Britain, we cannot but conclude that, at whatever period we may fix on for its first introduction into Ireland, there could have been but little difference between it and the Druidism of Gaul. There is therefore little in Caesar that might not be applied to Irish Druidism, as that religion is faintly depicted in alleged early Irish manuscripts. Caesar styles the priests by the general name of Druids; Strabo divides them into three classes, Bards, Vates, and Druids, and he makes the Vates the sacrificing priesthood and instructors of the schools; thus, according to this authority, the Druids were the ministers or priests; the Vates were the sacrificers; and the Bards* were the makers of song and of history.

* Under Christianity the bards appear to have been the representatives of the old pagan Druids. Before and after the introduction of the new creed they were a very influential class; they may have been countenanced by the Druids—they certainly were by the

The Irish appear, if any reliance can be placed on their manuscripts, to have had, like the Gauls, an Arch-Druid, whose abode was in Meath, and there the entire body of the priesthood assembled annually. Like the Gaulish Druids, it was the duty of Irish Bards to commit a number of verses to memory; and Caesar's statement that they committed none of their tenets to writing, although the art was to them known and practised in all other branches, demonstrates the probability that the Irish Druids also may have been acquainted with the use of letters.

A very curious, and hitherto but little noticed, passage from the works of a Greek traveller, named Æthicus, deserves attention. One writer asserts that Æthicus was born at the commencement of the second century; another, that he only saw the light at the end of the third, or beginning of the fourth; in fact, it would seem at present impossible to define with any exactness the period at which he lived; the only certain fact is that he does not appear to have had an exalted opinion of Irish literature.

The passage is from a work entitled *Cosmographia Æthici Istrici*, translated from Greek into Latin by a presbyter named Hieronymus. The author seems to aim at extreme brevity, using in one part very elliptical phraseology.

'He hastened to Ireland, and made some stay there, examining their volumes; and he called them *ideomochos*, or *ideotuitas*, that is unskilled workers, or uneducated teachers. For, setting them down as

new priesthood—and when superadded to the clergy, they, from their joint numbers, became very oppressive. Often threatened with expulsion from the kingdom, they, on one occasion, would certainly have been expelled had it not been for the exertions of St. Columbkill.

worthless, he says:—"To end one's travels with the ends of the world, and come to Ireland, is a heavy labour. But no opportunity (of gaining knowledge by painful travels) excites disgust too great (for encountering the pain), yet it profits not in point of utility. It (Ireland) has unskilled occupants and inhabitants destitute of instructors."' *

Caesar states that the Gaulish Druids taught the doctrine of the transmigration of souls, *i. e.* 'that the soul never dies, but after death passes from one body to another.' The Irish appear to have believed, not merely in the transmigration of one human soul into the body of another human being, but the transformation of one body into another, a relic probably of the religion or religions which were supplanted by Druidism; thus the soul of a man might pass into a deer, a boar, a wolf, a fox, a bird, &c., a state which may be described as a continuous metamorphostical existence.†

By superior intelligence, the result of long and, as regards their age, profound study, the Druids acquired an undisputed authority. They certainly studied the book of nature, the properties of plants and herbs, and utilised their knowledge to enhance their reputation for possession of necromantic powers; in short, the marvels of natural magic may have been prefigured under the Druidical cult.

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* *Ulster Journal of Archæology*, Second Part, p. 80.

† A curious example of the survival of this superstition may be instanced from the county Galway. In former times, if a fisherman of the Claddagh happened to see a fox, or even hear its name mentioned, he would not, on that day, venture to sea. Near the Claddagh there once lived a butcher, who used to take a humorous, but mischievous, advantage of the simplicity of his neighbours. 'They never, it appears, go to fish on Saturday, for fear of breaking in on the sabbath, a day which they always scrupulously observe. Friday is therefore one of their principal fishing days; and a suc-

According to the best authorities many of the deities of the Irish appear to have been *sidhes* (pronounced *shees*), that is to say deified mortals, for they dwelt in the *sidhes* or places where the dead had been deposited. These receptacles were scattered all over the land, and in and around them assembled for worship the family or clan of the deified person; hence it might be termed really a species of ancestral worship, and probably took its origin in that nameless fear of the dead which, in most savage peoples, finds expression in innumerable ways.

The word *sidhe* signifies the habitations supposed to belong to these beings in the hollows of the hills and mountains. It is doubtful whether the word is cognate with the Latin *sedes*, or from a Celtic root, *side*, a blast of wind. *Sidh* was originally applied to a fairy palace, and it was afterwards gradually transferred to the hill, and ultimately to the fairies themselves. At the present day, the word generally signifies a fairy.*

It appears to have taken a lengthened period before the inhabitants of the raths and sepulchral mounds assumed in popular imagination their present diminutive size. In a mediæval Life of St. Patrick it is narrated that, at one time in his travels, he repaired to a fountain about sunrise, where he stood surrounded by his clergy. Two daughters of the king came at an early

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cessful "take" on that day generally has the effect of reducing the price of meat in the ensuing Saturday's market. The butcher, whose calling was thus occasionally injured, contrived for a long time to prevent it, by procuring a fox—or, as some say, a stuffed fox-skin—and causing it to be exhibited every Friday morning through the village. This invariably caused a general noise and movement among the fishermen, not unlike those of gulls in a loom-gale, and it never failed to make them, for that day at least, to abandon their fishing excursion.'

* *Irish Names of Places* (1st series), pp. 179–183, P. W. Joyce.

hour to the fountain to wash, as was their custom, and encountering the assembly of the clergy at the fountain in their white vestments, with their books, they wondered much at their appearance. They thought that they might be men from the hills, *i. e.* fairymen or phantoms. They questioned Patrick therefore, saying, 'Whence have ye come? Whither do ye go? Are ye men of the hills? or are ye gods.' Thus, when this story was composed, the *sidh* population was, in popular imagination, of ordinary or human stature. It is clear that this *sidh*-worship had no affinity to Druidism; in fact was quite opposed to it, was of altogether a lower standard, and therefore it most likely preceded it in Ireland; and at the time of the arrival of the first Christian missionaries,* the two religions had probably not amalgamated. In some old Celtic tales the Druid and the *sidh* appear in direct antagonism. In the story of 'Connla of the Golden Hair and the Fairy Maiden,' the king calls his Druid to his assistance to prevent a *sidh* from bewitching and carrying off his son to the 'Land of the Living.' The sympathies of the listeners are all enlisted on the side of the Fairy as against the Druid, whose incantations are finally of no avail against her power. These *sidh* deities, like the gods of other nations, not unfrequently intermarried with the daughters of men, and their

* O'Curry, in his *Manners and Customs of the Ancient Irish*, points attention to the strange medley of Druidism and fairyism. He quotes from a MS. that 'the demoniac power was great before the introduction of the Christian faith, and so great was it that they (*i. e.* the *Aes Sidhé*, or dwellers in the hills) used to tempt the people in human bodies, and that they used to show them secrets and places of happiness where they should be immortal; and it was in that way they were believed; and it is these phantoms that the unlearned people called *Sidhe*, or fairies, and *Aes Sidhé*, or fairy people.'

offspring were either demi-gods, or became the heroes of Irish romance; they married, multiplied, warred, murdered, and thieved like their worshippers on earth. It is unjust, therefore, to recount as sober facts the records of these purely mythical tales.

If, at the advent of Christian missionaries, there was still an unhealed feud between the Druids, *i. e.* the priests of the recently introduced spiritual religion, which appears to have been that held by the chiefs and upper classes, and the majority of the people who were *sidh* or ancestor worshippers, pagans pure and simple, this would quite account for the easy conversion of Ireland to Christianity. Kings and Druids going over with comparative ease to Christianity would bring in their train some portion of their followers, and would place the entire power in the hands of the Priests, but the mass of the people would drag into and implant, in the Christian Church organization, their ancestor worship in the form of deceased holy men, their tree and well worship, their funeral orgies, and the numerous traces of paganism still distinctly to be observed throughout the land.

The public worship of heathen deities ceased amongst the mass of the population, but many privately practised it with tenacity. Whilst the memory of the greater divinities of the Irish Pantheon appears to have died out, belief in the minor powers, the *genii locorum*, firmly maintained its hold.

According to some observers in parts of Southern Europe, Christianity has, in the same way, not completely obliterated the ancient religion, but co-exists with it. It is not the major, but the minor deities which still retain—to some extent—their hold on the imagination of the peasantry; and in like manner if

Christianity was supplanted in Ireland by some other religion, it is probable, that though the name and attributes of the Deity might in time be forgotten, yet the tales and legends regarding the numerous army of saints would, some of them, linger on.

Trade in slaves undoubtedly formed a portion of early Irish commerce, and in the political institutions of Ireland, it is alleged that slavery formed an important part. The mass of the lower class of the community were born in a state of serfdom, and individuals—and even tribes, for crimes real or alleged—were frequently, according to the authority of some writers, reduced to the condition of slaves; foreigners, captured in war, were subjected to the same fate; and the captivity of St. Patrick, to which circumstance Ireland is stated to be indebted for the Christian faith, was occasioned by a marauding expedition of an Irish chief seeking plunder, as well as to recruit the number of his own slaves. Captives were made, not in the hope of ransom, but as marketable property. At a later period, Giraldus Cambrensis states that the Irish were accustomed to purchase Englishmen and boys from merchants and marauders.

Probably for some time antecedent to the generally recorded date of the introduction of Christianity into Ireland, small and scattered Christian communities may have existed in the country. They could have been founded by the ordinary channels of commerce through the zeal of British missionaries—by captives carried off by the Irish, who, at this period harried the western coast of Britain—by Christians who had fled from the Roman Dominions, to avoid the persecution of their pagan rulers, or from the swords of the northern hordes already harassing the eastern seaboard.

It is immaterial to fix the exact date of St. Patrick's arrival in Ireland; let it suffice that it was some time in the fifth century, and that he be acknowledged as the author of the composition styled 'St. Patrick's Hymn': *the* St. Patrick who spent six years of his life in slavery in Ireland, the captive of an Irish chieftain, who lived near Slemish in the County Antrim. Escaping from captivity, he resolved to preach Christianity to the heathen Irish. It has been remarked that nearly all his companions were either from Ulster or were descended from Ultonian families; this may be accounted for by the fact that his residence, as a slave, in the northern portion of the kingdom, made him better acquainted with that race than with those in other parts.

Arriving in the neighbourhood of Tara, the then Irish capital, or residence of the king, he made preparations for celebrating the Christian festival, and proceeded to kindle his pascal fire. No sooner did this light appear than the Druids recognized a rival power, as this very time happened to be a great Pagan festival, one of the inaugurating ceremonies of which commenced by the extinguishing of every fire throughout the country, and whoever kindled one before the Druids had rekindled theirs on the Hill of Tara, was liable to be put to death. The Druids, therefore, seeing, like the Ephesian artizans, a loss of their livelihood, came before the king, and requested him to have the fire at once extinguished, 'lest it would get the mastery of their fire and bring about the downfall of the kingdom.'*

* Despite the triumph of Christianity in the person of St. Patrick, a relic of this ancient custom still exists among the Irish peasantry. On the morning of the first of May it is even yet, in remote districts, customary, with such as believe in these old-world practices, to

This is the first recorded instance of open conflict between Christianity and Druidism in Ireland.

Ordered to appear before the king, the opportunity was afforded to St. Patrick of expounding the new religion to a distinguished audience. It was on this memorable occasion, it is alleged, that he composed the hymn which he sang as he approached the royal presence, and thus gave the king to understand the foundation on which his courage rested, but his explanations and exhortations failed to convince his hearers. On the supposed anniversary of the birth of the saint, a modern paraphrase of this hymn is sung in St. Patrick's Cathedral, Dublin.

St. Patrick, after 'binding' himself to many Christian virtues, which may be taken as confession of his belief in certain Christian doctrines, goes on 'binding' himself to the elements, claiming thus, that not alone were all the powers of Christianity on his side, but also the very elements that were worshipped by his opponents.*

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abstain from lighting their fires until mid-day, *i.e.* when the sun is at its meridian, or until their less cautious neighbours had first lighted theirs, as then the disaster would fall on those so offending; they will not allow any embers to be taken outside the house to kindle anything; a stranger would not be permitted even to light his pipe. Transgression of the rule is believed to be followed by heavy penalties, inflicted by the offended fairies.

* It may be inferred from this portion of St. Patrick's Hymn that the Pagan Irish worshipped and invoked the personified powers of nature, and this is corroborated by passages from ancient MSS. One king of Ireland received as pledges that the sovereignty should for ever rest in his family, 'the sun and moon, the sea, the dew and colours, and all the elements visible and invisible, and every element which is in heaven and on earth' (*The Banquet of Dun na Gedh*, p. 3). Another monarch, having broken his oath, perished 'from sun and from wind and from the rest of the pledges; for transgressing them in that time used not to be dared.' Again, in one of the poems of the heroic age it is related that when Queen Medb

St. Patrick evidently believed that the incantations and assumed magic of the Druids were not without some real foundation; that witches were still powerful for evil; and that 'Smiths,'* or cunning metal-workers, the forgers of weapons, &c., were necromancers; all these, in alliance with the Evil Spirit of his belief, were arrayed against him.

It is in this, his first interview with the Pagan ruler, that the incident is related how, when expounding the salient points of the Christian creed, he employed the shamrock as a symbol of the Mysteries of the Trinity. It is not likely that St. Patrick would have taken such an insignificant leaf to illustrate his theology unless some trifoliate plant was held in honour by his listeners, and several references to the trefoil, as being sacred, or used in sacred mysteries, occur in Classic writers. The Greek word comprehends the numerous family of plants which have triple or ternate leaves. In a passage in Pliny there is a curious reference to the supposed efficacy of the trefoil in curing

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and the Connaughtmen were pressing hard on Cuchullin, the sole champion of the Ulstermen, he called on the waters, on heaven, earth, and the rivers to protect him, and the elements answered his appeal.

* These workers in metals were held in great estimation by the Pagan Irish. They had their Gobhan Saor, *i. e.* Goban, the artificer, who may be said to answer to the Scandinavian 'Wayland Smith,' or the Greek Vulcan. In Christian times architecture appears to have been added to his skill in metallurgy, and to this day the primitive churches, round towers, and other buildings of antiquity, are, by the peasantry, attributed to the 'Gobhan Saor,' and their folk-lore is full of wondrous myths of this strange personage.

This superstitious reverence for the skilful artizan seems to be of world-wide occurrence. 'The sword-maker, who forged the finer blades for the Samurai and Daimio—the barons and knights (of old Japan)—was no mere blacksmith. He ranked, indeed, first of all craftsmen in the land, and was often appointed lord, or vice-lord,

the bites of noxious serpents. St. Patrick and the trefoil are in popular legend indissolubly connected, so that the tale of his banishing venemous snakes from Ireland may have had its origin in some superstition such as is described by Pliny.

A perusal of the so-called Lives of the early Irish saints brings before the reader, in a striking manner, the survival of Pagan institutions under Christian names and forms.

As on the Continent, the Christian Church first planted itself in centres of intelligence, in the towns and cities of the Roman Empire, whilst long after these had accepted the truth, heathen superstitions lingered on in the remote districts; so in Ireland also, the first conquests of the Church were effected in the centres of intelligence, the Court of the *Ard-Righ*, the fortresses of provincial chiefs, or the seats of commercial traffic; outside this sphere of influence, Paganism, for many centuries, must have continued to exist. The Pagan sacred fires were occasionally taken under the guardianship of Christian communities. Giraldus Cambrensis reports the common belief, in his day, that the sacred fire of St. Brigid at Kildare, which the Druids had

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of a province. He did not enter on his grave duties lightly. When he had a blade to make for a great Japanese gentleman, the katanya abstained for a whole week from all animal food and strong drink; he slept alone, and poured cold water every morning on his head. When the forge was ready (and no woman might so much as enter its precincts), and when the steel bars were duly selected, he repaired to the temple, and prayed there devoutly. Then he came back to his anvil and furnace, and hung about them the consecrated straw-rope and the clippings of paper which kept away evil spirits. He put on the dress of a court noble. . . . Only after many ceremonies, when the five elements—fire, water, wood, metal, and earth—were well conciliated, would that pious artizan take his hammer in hand.'—*East and West.* By Sir Edwin Arnold.

guarded there long before the introduction of Christianity, had never been extinguished.

In the Church of *Teach-na-Teinedh*, or the Church of the Fire, one of many remains of early Christian architecture, within the *enceinte* of a Pagan cashel situated on the Island of Inismurray, off the Sligo coast, there was formerly a remarkable flagstone styled *Leac-na-Teinedh*, or the 'Flagstone of the Fire.' Until lately it covered a supposed miraculous hearth, the foundations of which still remain. According to tradition, the monks kept a fire always burning on this flagstone for use by the islanders.

It is probable that the Druids consecrated water as well as fire on the eve of Bealtinne, *i. e.* the 1st of May, and possibly they also prohibited its use except when drawn from their own sacred fountains. This assumption arises from the special reverence in which certain springs were held. In some instances women were prohibited from ever drawing water from them, and, until a comparatively late period, it was customary not to draw the first water from wells till after midnight on the eve of Bealtinne. This water was called 'the purity of the well,' and is indubitably a relic of Paganism. The people of each village were in the habit of sitting up, that they might be the first to draw a pitcher of water from the nearest Holy-well; and as it was considered that the water should be drawn furtively, many stratagems were devised to outwit the neighbours in procuring the earliest draught, or 'purity of the well.' Whoever succeeded in being the first to reach the spring, cast a tuft of grass into the water, by which all subsequent arrivals were apprised that the spell was broken. This draught of water, carefully preserved during the year, was regarded as a powerful charm against witchcraft.

It was used at the eve of Bealtinne in the succeeding year for another ceremony. Farmers, accompanied by all their household, walked around the boundaries of their land, after sunset, in a sort of procession, carrying implements of husbandry, seed, &c., and this water. The procession halted when facing each of the cardinal points, commencing at the east, and various ceremonies were observed. All the cattle were then driven into one place and their tails examined, lest a witch might thereon have tied some spell; if anything were found attached, it was at once taken off and burned, and a sprig of rowan substituted. The ceremony was completed by sprinkling the assembled cattle with the water which had been preserved since the preceding May day. In some localities, cattle, either as a preservative against, or as a cure of disease, were driven through certain bays, inlets, or streams; for instance, near the village of Culdaff, county Donegal, there 'is a deep part of the river, into which it is usual to plunge diseased cattle, and at the same time to pray to St. Bodhan, who is supposed to intercede in their favour.*

The old Pagans had thus evidently two rites of purification, the one by fire, the other by water.

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* *Statistical Survey of the Parish of Culdaff*, p. 16.

CHAPTER IV.

THE DISPOSAL OF THE DEAD—WERE THE ABORIGINES CANNIBALS?

ACCOUNTS given by the Pagan writers, Strabo, Solinus, and Diodorus, of the alleged cannibalism of the Irish, or Scoti, of their day, are corroborated by St. Jerome,* who lived from about A.D. 346 to 420. The passage occurs in a controversial book which was written by him. Some writers, shocked at the narrative, try to evade its force by observing that Caesar and other standard authorities make no similar statement; but if Jerome's assertion is false we might fairly expect to find it contradicted at the time. Dr. O'Connor, in his *Prolegomena*, goes so far as to assert that this Father of the Church is, in the case in question, not worthy of belief, as 'he was a man of very fervid temper.' Classic writers are vituperated for reciting such tales, whilst Keating, the 'father of apocryphal Irish history,' who recounts a revolting story of a young girl being reared upon human flesh, is allowed to escape criticism.

In the fourth century the principal food of the Irish seems to have been 'stirabout,' and Jerome apparently

* Bede writes as follows:—'In course of time, Britain, besides the Britons and Picts, received a third nation, the Scoti, who, issuing from Hibernia, under the leadership of Reuda, secured for themselves, either by friendship or by the sword, settlements among the Picts, which they still possess.'

had as great abhorrence of stirabout as of heresy, for when writing against Celestine and his disciple, Albinus, he describes the one as 'overfatted with Scottish stirabout, and the other (Albinus), a huge and corpulent dog—one better qualified to argue with kicks than words—for he derives his origin from the Scotic nation in the neighbourhood of Britain.' The saint seems not to love the Scots (*i.e.* Irish); and in his eyes the eating of stirabout is on a par with the eating of human flesh, which he describes in emphatic words:—'What shall I say of other nations, when I myself, when a youth in Gaul, saw the Scoti, a race of Britons, eating human flesh; and, although in the forests they have herds of swine and herds of cattle, they are accustomed *nates feminarumque papillas abscindere solitos, et eas solas delicias arbitrari?*' *

In connexion with this subject, O'Donovan remarks that an ancient Scholiast on Horace's Odes states that the ancient Britons used to eat their guests; but that Baxter asserts, in his edition of Horace, that the poet meant not the Britons, but the Irish! His words may be translated thus: 'This is rather to be understood of the Irish. St. Jerome writes that he himself saw two Scoti in Gaul feeding on a human carcase.' The

* W. K. Sullivan, in his introduction to O'Curry's *Manners and Customs of the Ancient Irish*, xxxi., states that St. Jerome mentions the Atticotti in connexion with the Scoti, and after quoting the above passage, goes on to say that 'the picture which he (Jerome) paints of both, was very unfavourable, and based rather on prejudice *than accurate information*.' A few of Jerome's descriptions of the 'manners and customs' of the Scoti are here given:—'Scotorum natio uxores proprias non habet, et quasi Platonis politiam legerit et Catonis sectetur exemplum, nulla apud eos conjux propria est sed ut quique libitum fuerit, pecudum more lasciviunt.'—*Advers. Jovinian.* 'Scotorum et Atticotorum ritu ac de Republica Platonis promiscuas uxores communes liberos habeant.'—*Epist. ad Acean.*

designation Scoti here means Irishmen, and on this subject some curious mistakes have been made. Dempster, when writing his *Menologium Sanctorum Scotorum*, took for granted that Scotia meant Scotland, and he transferred to Caledonia the greater part of that noble army of confessors, of whom Erin is justly proud. For this theft, Dempster was given the nickname of *Hagiokleptes*, or the 'Saint-stealer.' 'Champion, who was in Ireland in the year 1567,' remarks O'Donovan, 'and who was not a rabid calumniator of the Irish people, like Hanmer, and even Spenser, believes that the Pagan Irish used to eat human flesh.'

Thomas Dinely, in a curious Journal which he kept during his tour through Ireland in the reign of Charles II., after describing the burial customs of the Irish, concludes thus:—'Several nations in Asia thought themselves guilty of great impiety should they lett their dead become a repast for worms. . . . They outvyed the doctrines of Pythagoras, ye philosopher maintaining only a Metempsychosis, or the transmigration of soules into other bodies; whereas these put in practice the transmigration of dead bodies into living ones.'

Thus, regarded from one point of view, the ancient Scoti or Irish were possessed of no virtues, and from the other point of view were innocent of crime; yet, when the past is examined, without regard to legendary tales or poetic fiction, we find them, even in their most brilliant periods, 'advanced only to an imperfect civilization, a state which exhibits the most striking instances both of the virtues and vices of humanity.'

If passages from classical authorities be compared with statements made by modern travellers with regard to the various customs at present prevalent amongst

savage tribes, they bear a great family likeness; and in trying to form a picture of human life in ages when there were no written records, we ought carefully to utilize the analogies presented by modern savage custom for the elucidation of superstitions to be traced in ignorant popular thought. Viewed thus, we find many of these superstitions no longer inexplicable, for we succeed very often in finding their probable parentage in ancient thoughts and customs. 'Many of the passages' —in classic writers—'have been bitterly assailed, but it will do no good at this juncture to turn to questions of textual criticism, or to evidences of personal credence attachable to each authority. These will be met by other methods: first, by the fact that the early recorded evidences of savage practices in Britain do not supply any customs but what are to be paralleled among savage practices elsewhere than in Britain or in Europe'; and it is impossible to believe that human ingenuity could be charged with such a phenomenon, as the invention, by different authors, at different times, of customs which have their analogies in actual life. Herodotus, when describing the customs of the Massagetæ, states that as soon as anyone amongst them 'becomes infirm through age, his assembled relations put him to death, boiling, along with the body, the flesh of sheep and other animals, upon which they feast, esteeming universally this mode of death the happiest. Of those who die from any disease they never eat; they bury them in the earth and esteem their fate a matter to be lamented, because they have not lived to be sacrificed.'

Ideas and practices of races in a very low state of culture are likely to present a faithful picture of the ideas and practices of the earliest races of mankind.

When investigating the sites of Swiss lake-dwellings, the anthropologist turns for parallels to Borneo and to Africa; and when investigating the alleged cannibalism of the primitive inhabitants of Erin, we necessarily turn to the most uncultured savage races at present in existence. The accusation of cannibalism relates not alone to the Irish, but to all the ancient people of the British Isles, though, at the time of the Roman conquest of England, its inhabitants appear to have already passed beyond the stage in which they eat their dead.

When the curtain is first raised on the drama of human life in Ireland, the aborigines were entirely in the hunting stage; they lived on the produce of the chase, and the spoils of the inland waters, and of the sea. Later, the ox and the sheep became common, demonstrating that the pastoral stage had been reached; then domesticated animals, such as the pig and goat, appear; agriculture is the last and final stage in the ascending scale of human amelioration. Of the primary inhabitants of Erin we know comparatively nothing; they may have been a remote swarm of colonists of cognate race with the Lapps, Finns, and Esquimaux. The scanty remains of their civilization are found in rude sepulchral cists, in caves, and in water-drifts. Canon Greenwell, who has explored numerous barrows of the Stone Age—particularly in the north of England—is of opinion that many of the human remains which they enclose exhibited indications of cannibalism having been practised; whilst another specialist sees no difficulty in acceding to the conclusions thus arrived at. Human sacrifices and cannibalism, however, may have co-existed with a comparatively high state of civilization, and numerous instances could be mentioned—the Aztecs in America will suffice. The practice of

eating the dead, whether captives in war or deceased relatives, is known to have been prevalent in ancient times, and modern travellers give so many instances that only two typical cases need be cited, the one in Africa—brought lately into such notoriety by Stanley—and the description of a funeral feast amongst the aborigines in Queensland, Australia, in the year 1870. In the latter case we are told that a native having died, a funeral procession was formed, and before a large fire, the body was most scientifically skinned, and then dissevered limb from limb, and the flesh removed from the bones. After a short absence from the scene, the spectator found, upon his unexpected return, great lumps of meat roasting on the fire, and he significantly adds that the natives 'abstain from kangaroo for several weeks after a death.' In ancient days it was a belief that the physical, mental, and moral qualities of man were intimately connected with his food, and it is still a very prevalent idea, amongst tribes in a rude state, that the flesh of certain animals imparts, to some extent, the characteristics of the animals eaten—the flesh of the fiercer beasts of prey imparts courage; that of the stag, speed; that of the dove, gentleness; that of the hare,* timidity, for which reason, perhaps, the ancient Irish did not eat the hare. This train of thought may have tempted the

* It may appear strange that a creature apparently so insignificant should have been looked on as sacred, but such appears the case with the hare; at any rate in the British Isles, for we have the authority of Caesar that, at the time of his invasion of Albion, the hare was 'tabooed!' 'They think it unlawful,' Caesar states, 'to feed upon hares, pullets, or geese; yet they breed sheep up for their diversion and pleasure.' Even in the present day there is, in some localities, a 'prejudice against eating hares, on the part of some of the people, lest they should turn out to be witches. A cry would, however, be heard, I was informed, when the hare was being cut up.'—*Folk-Lore*, vol. iv., p. 184.

aborigines of Erin to eat their deceased relatives, so that the warlike or other virtues of the dead might be perpetuated in the family or tribe. The custom still surviving in Irish wakes of partaking of food, drink, salt, tobacco,* or snuff in the presence of the dead seems to be an amended form of the older practice of consuming such things after they had been placed upon, or near, the corpse or coffin; and this in turn seems to imply that the recipients would have transmitted to them some of the qualities of the dead man; so that we have in the modern usage a fragmentary relic of the savage feast, when the real body of the deceased was consumed.†

W. K. Sullivan, in his introduction to O'Curry's *Manners and Customs of the Ancient Irish* (cccxxiii.), remarks that 'many of the funeral rites necessarily survived the substitution of the burial of the body for

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* Not many years ago there were deposited with the corpse, in a graveyard in Devonshire, 'a candle, a penny, and a bottle of wine.' The candle was to give the deceased light, the money was to pay his fare over the river of death, and the wine was to sustain him on his journey. It is alleged that, in the town of Cheltenham, a pipe and tobacco-pouch are sometimes placed in a coffin with the dead body.—*The Cheltonian*, No. clxxxv., 2nd Series, p. 39.

† Denis H. Kelly, writing to O'Donovan in 1858, thus describes this portion of the ceremony at an Irish wake:—'The corpse of the deceased is dressed in clean white grave-clothes; is stretched on its back on a table in the middle of the room, with five or seven candles round it, according to the circumstances of the defunct, the larger number being used by the wealthier. On the breast of the corpse is placed a plate of tobacco, cut in short lengths, and a plate of snuff. . . . There are seats ranged round the wall, and immediately behind the corpse's head is the place of honour, where sit the chief mourners and most respected guests, amongst whom, in wakes of the higher classes, sits the *keener*.'

At these wakes certain games, or sports, were in use, which appear to have been essentially of Pagan origin, and of such a character that, although at first tolerated, yet, in more civilized days, they were suppressed.

cremation, and among them, no doubt, the lighting of torches with which the pyre was kindled, and which in after times were replaced by the candles put around the dead body. Hence, the kindling of torches or the lighting of candles, took the place of the lighting of the funeral pyre.'

In many localities throughout Ireland, mould taken from the reputed grave of a 'saint,' if mixed with water or boiled in milk, and swallowed by the recipient, is considered to be an infallible remedy for certain maladies. A small portion of the 'saint's' skull * is also regarded as a specific. Grose mentions that, in his time, in the graveyard of the Abbey of Clonthuskert, county Roscommon, a skull was shown 'in which milk was boiled and given to a man afflicted with epilepsy.'

In some localities, bodies when committed to the earth, do not decay in the ordinary way, and adipocere† in large quantities has often been noticed when the ground was opened for fresh interments. In one graveyard the sexton had recently to gather up and carefully secrete this substance, as otherwise it would be carried off by people whose relations were afflicted with consumption: when melted, the adipocere was administered to the invalid as a certain cure for the malady. Here the real body of the deceased is consumed, as in the other instances noticed it is consumed figuratively.

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* Portions of the skull of the poet Carolan were thus utilized by the peasantry. Small fragments broken off were ground fine, put in water, and swallowed, as a cure for epilepsy.—*Ulster Journal of Archæology*, vol. i., p. 304.

† Adipocere is a soft, unctuous, or waxy substance, of a light brown colour, into which the fat and muscular fibre of bodies are converted by burial in soil of a peculiar nature.

According to Irish MS. authority many barbarities are to be met with in the tales relating to ancient warriors, who appear to have been addicted to an habitual savagery:—'An Irish warrior, when he killed his enemy, broke his skull, extracted his brains, mixed up the mass well, and working the compound into a ball, he carefully dried it in the sun, and afterwards produced it as a trophy of former valour and a presage of future victory. "Take out its brains therefrom," was Conall's speech to his gillie, who declared he could not carry Mesgegra's head, "and ply a sword upon it, and bear the brain with me, and mix lime therewith, and make a ball thereof." These trophies are described as being the object of pride and contention among the chiefs, and Mesgegra's brain being captured by Cet from Conall, was hurled at Conchobar, and caused his death. Then we have the practice recorded, of cutting off the point of the tongue of every man they slew, and bringing it in their pouch. Carrying the heads of the slain at their girdle, first noted by Strabo and Diodorus Siculus, is clearly implied in the saga which Mr. Whitley Stokes has translated from a twelfth-century copy, called the "Siege of Howth."'* In the story of 'Echtra Nerai,' the hero is reputed to have beheld a heap of heads cut off by the warriors of the 'dun,' or fort, and this statement calls to mind the piles of heads described by travellers as often to be seen at the entrance to the residence of an African chief.

In the story of the death of *Crimthann* and three other personages, as recorded in an old Irish manuscript, there occurs a passage which, according to O'Curry,

* *Ethnology of Folk-lore*, G. L. Gomme, pp. 146–7. The authorities for the statements are therein all quoted.

seems to prove 'not only the tradition in historic times of the practice of cremation of the dead in Ireland, but also that of putting persons to death at funerals. This important passage is as follows :—" *Fiachra* then brought fifty hostages with him from Munster, and he brought a great *cain* (*i. e.* booty levied as legal fine), and he went forth then on his way to *Temar*. When, however, he reached *Forud* in *Ui Mac Uais* in Meath, Fiachra died of his wounds there. His Leacht was made, and his Fert was raised, and his *Cluiche Caintech* was ignited, and his *Ogam* name was written, and the fifty hostages which he brought from the south were buried alive around the *Fert of Fiachra*, that it might be a reproach to the Momonians for ever, and that it might be a trophy over them." The reproach which this act was intended to cast on the men of Munster consisted, no doubt, in treating the Munster hostages, who were all of the highest birth, as if they were the dependents and slaves of *Fiachra*. It may be, also, that putting them to death in the way here described, and burying them around him, as they would have sat in fetters along the wall of his banqueting hall, consecrated them, as it were, to perpetual hostageship even among the dead.'*

We read of the Cucamas that, 'as soon as a relation died, these people assembled, and ate him, roasted or boiled according as he was thin or fat.'† Among cannibals, the offering of human flesh to the dead is inevitable. Human sacrifices at graves had originally the purpose of supplying human flesh for the support of the spirit of the deceased.

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* *Manners and Customs of the Ancient Irish*, vol. i., pp. 320–1.

† *The Principles of Sociology*, Herbert Spencer, p. 102.

H. Heine states the opinion prevailed in ancient times that, when 'any building was to be erected, something living must be killed, in the blood of which the foundation had to be laid, by which process the building would be secured from falling; and in ballads and traditions the remembrance is still preserved how children and animals were slaughtered for the purpose of strengthening large buildings with their blood.' Some fishermen, to the west of Galway, in order to obtain a fair wind, 'buried a cat to its neck in the sand on the sea-shore, turning its face to the point from which the adverse wind blew, and then left the poor animal to perish.'*

In Greece, at the festival of the Omophagia, in honour of 'Bacchus carnivorous,' it is stated that, in early days, human victims were immolated; in later times, the sacrifice was commemorated by the priests being compelled to eat raw meat.

A passage from a poem in the Dinnsenchus, on the Fair of Tailté, appears to refer to the alleged prohibition by St. Patrick of human sacrifice:—

> 'The three forbidden bloods—
> Patrick preached therein (*i. e.* the fair),
> Yoke oxen, and slaying milch cows,
> Also by him (against the) burning of the first-born.'

Mackinnon remarks, in *Culture in Early Scotland*, 'we may, without being guilty of calumniating the dead, pronounce our ancestors of the Stone Age, if not even those of later date, to have been savages.'

The theory has often been advanced that because human osseous remains decay under certain circum-

* *Chorographical Description of West or H-Iar Connaught*, pp. 99–101.

stances with comparative rapidity, that therefore the traces of man found in the megalithic monuments in Ireland can be of no great antiquity. Under certain conditions, however, the large bones of man and of other mammalia are comparatively indestructible. Animal matter is stated to be abundant in the bones of Egyptian mummies known to be upwards of 3000 years old. Buckland made soup from bones of the extinct British cave hyena, and jelly has been extracted from those of the Ohio mammoth. Bones committed to the ground will be preserved, or perish in accordance with natural laws; it may, however, be fairly assumed that the exclusion of water is a special requisite for preservation.

Skeletons are sometimes found buried in a sitting posture; it is alleged that this was the position assumed by primitive man for repose, and some go so far as to state that he 'had muscles developed specially for this purpose.'

In a cist at Tullydruid, county Tyrone, a skeleton was discovered in a sitting position. The head was turned towards the east, and at the knees was a sepulchral urn. Another skeleton was in such a good state of preservation that it was with the greatest difficulty some zealous members of the Royal Irish Constabulary were dissuaded from sending for the coroner to hold an inquest on the remains of the deceased who had 'shuffled off this mortal coil' some two thousand years ago!

A skeleton is alleged to have been discovered buried in an upright position in a tumulus in the county Meath. The tumulus was in the form of a frustrum of a cone, about twenty yards in diameter at the base, and about twelve feet in height. This singular mode of interment

is noticed in old MSS. One old warrior was buried within the ramparts of his fortress, armed for battle. King Laoghaire was interred in a similar manner at Tara. Eoghan Bell, King of Connaught, slain in 537, was buried on the banks of the river Sligo, erect, weapon in hand, and his face to the foe.

In committing to the ground the remains of their dead, the customs of the aborigines appear to have varied. In the first stage the interments were carnal, and there appears to have been a floor of yellow or other hard clay formed, on which the remains were placed. Then cremation appears to have obtained, and, again, carnal interments predominated; of course there is confusion and a commingling, as one custom lingers on and overlaps the other;* but such it is believed was

* The late R. C. Walker, who opened a great number of sepulchres in the county Sligo, gave an interesting account of the examination made by him of a tumulus. He states that :—'One kist or tomb which contained the remains of a great number of skeletons, some evidently burned, and others exhibiting no trace of fire, occupied the centre of a large carn. Some idea may be formed of the magnitude of this great kist when it is known that one of the stones which formed the side of it was sixteen feet in length and about six feet in breadth. In this tomb were found six different human interments, which occupied the eastern and western ends, the centre part being unoccupied. The bones were not contained in urns, but were collected together into heaps that rested upon the freestone flag which invariably formed the bottom or floor of the inner tomb. The large bones, such as the arms, legs, and thighs, covered the half-calcined remains of the smaller ones, and the skull surmounted the little pyramid thus formed. Round the margin of this heap was collected a quantity of the bones of birds and some of the lower mammalia, together with a number of small shells, principally the land *Helix*; and each of these six interments was kept distinct, and surrounded by small freestone flags. No weapon or ornament of any kind was discovered in this tomb. Here, then, in this very remarkable tumulus of the class denominated "giants' graves," we have remains of nearly every form of interment employed by the aborigines of this country.'—*Beauties of the Boyne and Blackwater*, W. R. Wilde, p. 239.

the succession of the funeral customs. A good example of a mixed interment occurred in one of the cists of the Carrowmore series of rude stone monuments—an uncalcined interment had been made over incinerated remains. At the lowest level of the side-stones of the cist a floor or flagging of calpy limestone-slabs was found. It was on this—which overlay the undisturbed 'till'—that the body, or bodies, of the primary interment had been originally cremated, portions of the floor showing marks of fire; and semi-burnt wood was found intact, with the layer of calcined bones above. It was plainly evident from the floors and burnt bones extending in 'pockets' under the side-stones of the cist, that the latter had been constructed over the funeral pyre, that the calcined remains were the primary interment, and that they had not been placed within an already completed chamber—differing in this respect from the interments at a tumulus at Dysert, where the cists were first finished, and the fire lighted on the covering slabs. Although the soil and *débris* in the Carrowmore cist were carefully excavated and sifted, no flint implements, ornaments, or traces of fictilia were observable; yet, despite this, the exploration seems to throw great light on the manner in which these primitive 'cremationists' burnt—at any rate in some instances—their dead. The word 'cremation' is apt to convey to the mind an idea of swift and complete destruction of a body by fire. By some modern methods it is alleged that an ordinary-sized corpse can be reduced to a few pounds of ashes in half an hour; but the primitive method of placing the body on a pile of wood was necessarily often lengthy and imperfect in its results. Bones, thus roughly cremated, present curious crack-like marks, or nicks, the effect—a mechanical one—of

unequal contraction of the bone in cooling. They cannot be marks of scraping, for they are, almost without exception, transverse, whilst scrapes, if intended to strip the bone, would be longitudinal; they also, in many instances, extend through the entire thickness of the bones, show on the interior of the median canal, and are also found on pieces of the flat bones of the skull. To give prominence to such an apparently needless detail is necessary; for a superficial observer might, on observing the cracks in calcined bones, arrive at the conclusion that they were marks of cannibalistic origin.

Amongst the animal osseous remains found by W. J. Knowles amidst the sites of primitive huts, believed to belong to the Stone Age, at Whitepark Bay, county Antrim, were many human bones; but whether bones thus scattered about, in conjunction with those of animals, indicated that the people were cannibals, is a question not yet decided. In a tumulus near the 'Gibbet Rath' on the Curragh of Kildare, opened in the year 1859, there was found, in a small cist, a cinerary urn, composed of black, half-burned pottery; it was originally about two feet in diameter, and in it were deposited portions of a human skeleton, comprising fragments of the skull and some teeth. In the course of subsequent explorations another urn was discovered in a neighbouring mound, and, about three feet beneath the summit of another tumulus, a cist was found nearly eight feet long, in which lay four or five skeletons; in other interments portions only of the bodies seem to have been originally committed to the earth; thus it will be perceived that in this area, which appears to have been carefully examined, every description of interment was practised by the old occupants of the land.

An urn discovered in a barrow at Topping, near Larne, county Antrim, contained imperfectly-burnt human bones—'apparently much broken and split by force before being charred.' The jaw, of very small size, was found nearly perfect; this, together with the dimensions of the other bones, led to the conclusion that the individual was of very small stature, and, from the configuration of the bones, it was probably a man.

In the cave of Ballynamintra, fragments of human bones were mixed with stone implements and animal osseous remains.

A good example of the transition from carnal interment to cremation is afforded in the examination by the late Rev. James Graves, in the year 1851, of the carn of Cloghmanty, in the county Kilkenny. The average diameter of the carn was seventy feet; it had been originally of considerable height, but the central and other cists had been denuded by the stones of the carn having been removed for various purposes. The central chamber was large, and appears to have contained two skeletons almost perfect. In the course of time new customs obtained; the dead were burned, some of the bones were collected and placed in fictile vessels; the old burial-place was still used by the people practising cremation, and the calcined remains were placed in smaller chambers in the already existing carn.

The ancient Irish had a custom of burying white stones or lumps of quartz-crystal* with the dead; these are by the peasantry sometimes called 'Godstones.' A cemetery of stone-lined graves was discovered near the

* Quartz crystals are regarded by the Apache Indians as 'medicine.'

ancient burying ground of Saul,* county Down; and it was remarked that, in each grave, there were several white pebbles. One cist examined at Barnasraghy, county Sligo, was literally filled with pieces of angular-shaped white quartz, and similar fragments accompanied almost every interment in the Carrowmore series of megalithic monuments. These quartz-stones, or white water-worn pebbles serve to identify the human remains as belonging to a very ancient period of sepulture. The custom, although common, has been little noticed by explorers. At the bottom of one of the cists in the celebrated pagan cemetery of Ballon Hill, county Carlow, a funeral urn was found inverted, and, beneath it, placed in a triangular position, were three small, smooth pebbles, surrounded by a few pieces of burned bones, one was white, one black, and the third was of a greenish tinge. A white stone was found in a primitive interment not far from Larne, county Antrim.

This custom of placing rounded or oval stones with the dead survived into Christian times. When the grave of St. Brecan, in Aran, was opened, there was found beneath a large uninscribed flagstone a number of rounded stones averaging about nine inches in diameter, evidently picked up and brought to the saint's last resting-place from the adjacent strand. One of these, now in the Science and Art Museum, bears an inscription in Irish character.

White quartz-stones have also been found in the

* The legend relative to the origin of this name is as follows :— A chief named Dichu, who ruled over a district near Downpatrick, having entertained St. Patrick and his companions, became his first convert to Christianity, and granted his barn to be used as a church, 'which place,' writes Ussher, 'from the name of that church, is called in Scotic to this day, "Sabhall Patrick," *i.e.* "Patrick's barn," represented by the modern name, "Saul."'

Hebrides, in primitive interments, and in chambers in the interior of carns ; they have been observed in various old British tombs, and also within the sacred circle on the Isle of Man, a circle which, from time immemorial, has been held in reverence. In most of the old tombs excavated in the neighbourhood of Dundee these pebbles were also found. An examination of a "Pict's House," at Kettleburn, in Caithness, Scotland, demonstrated that smooth stones of various shapes and sizes, such as might be picked up on the seashore, were found in several of the chambers, among the ashes. The custom of burying white water-worn stones, or pieces of fractured quartz or crystals,* may have been practised contemporaneously in Scotland and Ireland. The smooth, white, clean, and polished stones were probably to the ancient Pagan mind emblematic of some religious idea.

Shakspeare seems to have been well acquainted with the ancient rite, for in the play of Hamlet he makes the priest to say, when attending the body of Ophelia to the grave—

> 'Her death was doubtful ;
>
> . . . . . .
>
> She should in ground unsanctified have lodged,
> Till the last trumpet ; for charitable prayers,
> Shards, flints, and pebbles should be thrown on her.'

This means that in a case of supposed self-destruction the corpse being deemed unworthy of the rites of the Catholic Church, pagan observances should suffice. Some excellent examples of this ancient peculiarity of sepulture were observable in the townland of Carrow-

* Rock-crystal is sometimes found in lieu of white quartz or pebbles; and on the Continent it was customary, in early times, to deposit crystal balls in urns or sepulchres.

nagark, parish of Tawnagh, county Sligo. An esker, or hill, composed seemingly of good gravel and sand, had been utilized as a gravel-pit. The upper surface of the soil, apparently not more than eighteen inches in depth, was thickly studded with human and animal bones, the excavations made for sand and gravel giving a perfect section of this interesting caltragh. About one foot under the surface-sod, two human skulls were observed; over one lay a hammer-stone formed of sandstone, and over the other lay a flint flake and several pieces of charcoal.

Near Inverary, it is the custom among the fisherfolk, and has been within the memory of the oldest, to place little white stones or pebbles on the graves of their friends. No reason is now given for the practice.

Amongst the Manx it is considered to be unlucky to have a white stone in a fishing-boat, even in the ballast. No explanation is given, but there can be no doubt as to the fact of the superstition, which may be illustrated from the case of a gentleman who went out with some fishermen several days in succession. They chanced each time to be unsuccessful, and therefore bestowed on their Jonah the nickname of *Clagh Vane*, or 'White Stone.'

In a description of Abyssinia by J. Theodore Bent, he states that a place called 'Bogas has one striking and highly interesting peculiarity, namely, its black and white tombs, which are scattered all over the country, and the approach to Keren is a perfect Appian Way of this curious form of sepulture. When a man dies they build a round wall of black stones over his grave; here they sacrifice goats, put food for the dead, and perform their wails over the departed. If the occupant of the tomb has died a natural death, they, in

the course of the year, pile up heaps of white quartz in the form of a native hut; if he has died of the vendetta, or any other unnatural death, they put only black stones over him. One nest of graves we saw consisted of seventy-two tombs, round the big white grave of the head of the family; three only of these tombs were black, but in other groups the proportion was much larger.'

In presumably early, as well as late, carnal interments, several instances occur in which stone axes and weapons have been discovered imbedded in the crania, whilst a bronze spear-head was, in the year 1814, found near Kilkenny, driven into a human skull, part of the weapon being broken off, apparently by the force of the blow. This, of course, only proves that the defunct met his death by violence; but again, in many instances the long bones of the leg and other parts of human skeletons are found with clearly-marked longitudinal fractures, which, when observed in osseous remains in the refuse-heaps of crannogs or lake-dwellings, have occasioned archæologists to pronounce, without hesitation, the verdict that these animal bones had been fractured for the purpose of facilitating the extraction of the marrow. In general, the space in which human remains are found is too limited to have contained even one adult body, whilst traces of several are often recognizable. The only way to account for this is, that the body or bodies were dissevered and packed within their 'narrow home'; for, if we are to judge from their sepulchral monuments, these old-world folk viewed their dwellings as mere temporary shelters, and regarded their tombs as their true and permanent abode. Again, it is a fact that, in many cases, no traces of the jawbones or of the teeth were to be seen, although teeth are known to be the most enduring

portion of the human frame, but the crania were comparatively perfect. In one instance, whilst the crania were present, all the remainder of the skeletons were missing, presenting only a few obscure osseous remains, which might have been human or might have been animal. On the subject of the position of the bones, when found *in situ*, in an obviously hitherto undisturbed megalithic chamber, a surgeon who was present and examined them stated that 'they were placed there, subsequent to the removal of the flesh and other investing media.'

About the year 1845, a sepulchral mound was opened in the neighbourhood of Portaferry. In the centre was a chamber about six feet long, formed by eight very large upright stones, a large flag-stone forming the floor, on which lay, in one heap of a foot in thickness, a mixture of black mould and bones. These were all human, and consisted of portions of ribs, vertebræ, and ends of the long bones, together with pieces of the skull and joints of the fingers of a full-grown person, also several bones of a very young child. None of these had been subjected to the action of fire, but there were several fragments of incinerated or calcined bone, also human. Either these latter were portion of the same bodies burned, or they belonged to an individual sacrificed to the manes of the person whose grave this was; and the latter is the more probable, from the circumstances under which similar remains have been discovered in other localities. There were no urns, weapons, or ornaments discovered in connexion with it.*

In 1859, Captain A. M. Moore, A.D.C. to Lord Seaton, commanding the troops in Ireland, opened a dozen

* *The Boyne and Blackwater*, W. Wilde, pp. 234–5.

tumuli which lay in a small area on the Curragh of Kildare, and he 'found in every instance large quantities of bones, in most cases giving one the idea of legs, arms, and skulls, having been thrown in promiscuously.'

In 1876, Dillon Kelly, M.R.C.S. England, gave a long and detailed account of the opening of a tumulus at Dysert, Co. Meath, resulting in the discovery of two chambers, containing each an unburned human skeleton. On the covering-stone of one of the chambers there were uncalcined, or slightly calcined, human remains, with others fully calcined superimposed. One of these deposits consisted of the skeleton of a youth scarcely more than twelve years old. The chamber was completely surrounded with a mixture of clay, ashes, and sandstone-blocks, partly disintegrated by the action of intense heat, so that it would appear as if the chamber was first constructed, the body then deposited in it, the covering flag imposed, the funeral pyre erected over it, the victims immolated, their bodies then placed upon it, the torches applied, and the fearful rites of Pagan sepulture, according to the usages of a semi-barbarous people, consummated. The victims consumed, the *débris* of their bodies was collected and deposited on the cover of the chamber; the ashes of the pyre then heaped about the cistvaens, the boulders over it, and lastly, the outer covering of clay over all. The order of the rites supposed to have been observed at the deposition of the skeletons contained in the chambers, and the immolation of the victims over the cistvaen, receives additional weight from the baked appearance of the top of the skulls of the tenants of the tomb. This is the only portion of the remains enclosed in the chambers which shows marks of having been subjected to heat, and as these portions of the crania must, from

the sitting posture of the skeletons, have come into almost immediate contact with the covering flagstone on the top of their 'narrow home' over which the funeral pyre was burning, the conclusion as to the process pursued in this case becomes almost a certainty. At first it appeared as if the incinerated remains contained the bones of both animals and birds, and that the rite of human immolation was accompanied by the sacrifice of birds and beasts; but strict examination and the discovery of the vertebræ of the youth at once solved the difficulty. The bones supposed to belong to animals and birds were identified as the long bones, and the metatarsal, or instep bones of a person of tender age, but contorted into the most extraordinary shapes from the effects of the intense heat to which they had been subjected.*

In addition to human remains, the ancient pagan cemetery of Rathmoyle, county Kilkenny, contained the bones of various animals. 'These relics of the lower animals,' remarked the late Rev. James Graves, 'would seem to indicate that the obsequies of the dead were accompanied by the funeral feast, an idea which receives confirmation from the fact that the north face of the excavation exhibits a perfect section of a pit sunk into the gravel. . . . This pit is probably one of those anciently used to cook animal food, according to the well-known method in vogue amongst the ancient Irish, as related by Geoffrey Keating.'

From many well authenticated excavations of previously undisturbed interments, in which no trace of cremation was apparent, it is evidently impossible that the chambers which contained some bones of different

* *Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 177–182.

human skeletons, could possibly have received even one corpse entire. The bones must either have been the 'wretched remains' of victims immolated during the celebration of sepulchral rites, or relics of warriors slain in battle, buried, and subsequently disinterred for final repose in the sepulchres of their ancestors. An example of a fragmentary human interment was discovered by W. F. Wakeman in one of the megalithic chambers of a carn, on the slopes of Topped Mountain, in the Co. Fermanagh, which had, until recently, been covered by a thick growth of peat. The position of this carn affords some data from which the first, or a very early colonization of the island, may be deduced. After a description of the manner in which, in geological times, the valley under Topped Mountain had been scooped out during the Glacial Period, the writer states that the Arctic climate was probably succeeded by a more genial one, causing a luxuriant vegetation, evidence of which is presented by the peat bogs that fill the depressions in localities that, at one time, were land lakes. On this new surface sprang up a forest of oak and pine, some of the trunks being of enormous size, such as could not grow in the locality at the present time; even hardy trees, which in modern days have been planted in the situation, have remained sickly and stunted. On the ancient surface, where grew the giant timber, varying from sixteen to twenty feet beneath the present surface of the bog, numerous traces of rude pottery and burnt brick-clay were found; therefore the ancient Pagans, who built the carn on the slopes of Topped Mountain, lived under the shadow of this forest, and erected the megalithic monuments during the time it existed. The part of the mountain on which they stand must have been perfectly dry on

the surface, at the period of their erection, for these remains, resting on the soil, are covered with *mountain peat*, to a depth of about eight feet.

The peat in the depressions of the mountain, and that which is formed higher up, near the summit, accumulated under very different climatic conditions. In the depressions it is a black, compact mass, produced by a rank growth of decayed vegetable matter—the effects of a warm climate; on the elevated ridges the peat is of later growth, produced by the highlands having been transformed from dry into swampy expanses. This was brought about by the changes of the climate, which, when warm and dry, would produce no vegetation on the parched highlands, but, when it altered, and became cold and wet, it produced a peculiar and unmistakeable vegetation styled *mountain peat*. This demonstrates that the Pagans enjoyed a better climate, more sunshine, and less rain, than their Christian successors now-a-days.

There appear to have existed in Ireland from a very remote period great tracts of turf bog, which have afforded the means of preserving, to a great extent unimpaired, the relics of apparently many different ages. In these depositions, not merely metallic objects, but those composed of wood, may continue to exist with but little change for an indefinite period. Most of these bogs (until within the last few centuries) have remained undisturbed by the hands of man, with the exception of some surface-cutting; for so long as the extensive forests existed, it was easier to obtain fuel from them than to have recourse to cutting wet peat, which required a subsequent tedious process of drying.

The destruction of the forests was sometimes brought about by natural causes, such as climatic changes, and

sometimes by conflagrations, perhaps resembling those we see from time to time recorded in American newspapers; whilst others appear to have been felled by a slow but systematic method practised by primitive man. A careful observer found in the Queen's County distinct marks of fire on nearly all the butts of old trees that lay on the edges or margins of bogs examined by him—showing that fire had been the agency employed. There is generally, on one side, a piece burned out, about a foot or two above the roots of the tree; and it would occupy a considerable time to take down a large tract of timber in that manner. This mode of felling trees must have been practised before iron or even bronze axes were in use, as no one who could wield a metal adze would employ so slow and ineffectual a means as fire. In the opinion of some antiquaries that process must be relegated to the Neolithic Period; but who can decide when that period ended in Ireland? The geologist and turf-cutter both instruct us that Ireland was, in olden days, almost a continuous forest; and in several parts traces of these woods have been discovered along the seashore under high-water mark, demonstrating that, in places, the sea has in recent times encroached on the land. Geologists, however, go much further than this, and point to the fact that the phenomenon of submarine forests is very general, not only in Ireland, but along the seacoasts of the British Isles, especially where shelving shores and sheltered inlets favour the preservation and retention in position of the 'corkers,' or stumps of trunks, with the roots still attached, of the primeval forests. Various calculations have been made by scientists as to the rate at which the peat which covered these forests in inland parts was formed, but such attempts are practically of little use,

for the growth varies even as the conditions under which it is formed vary. The peat which covered the rude pottery on the slopes of Topped Mountain to the depth of twenty feet must have formed *after* the manufacture of the fictilia, and *before* the *mountain peat* which covers the carns on the summit of the mountain had commenced to grow. One well-worked-out calculation would give to the megalithic structures on Topped Mountain the respectable antiquity of about 3500 years, which, after all, in the world's history, is but a minute fraction of time, or, taking the average growth of *mountain peat* over the carns on the summit of the mountain to be ten feet, and the growth of mountain peat to be but half that of lowland peat, the same age may approximately be inferred.

Thus, we see that, whilst native writers state that ancient Erin was a highly civilized, cultured, and homogeneous nation, classic writers state it was peopled by tribes of cannibals. When such a divergence of opinion arises, is it not the most straightforward course to appeal to the traces left by the primitive inhabitants to guide us to a decision? If a man, in those distant ages, ate his neighour, his enemy, or his friend, he did so without having before him the fear that, at a remote period, some antiquary would be investigating the *disjecta membra* of the feast; whilst, if it be thought that a slur is cast on the Irish by the suggestion of a prevalent cannibalism, it should satisfy the national pride to know that the dwellers in Caledonia and Albion, and indeed it may be said almost all primitive tribes, were originally in a similar state of savagery.

In *Ethnology in Folk-Lore*, G. L. Gomme states that cannibal rites were continued in these islands until

historic times; that savagery was not stamped out all at once and in every place; and that, 'judged by the records of history, there must have remained patches of savagery beneath the fair surface which the historian presents to us.'

The origin of Grecian civilization was quite as rude as that of the Irish; for, if we are to credit early tradition, the first inhabitants of Greece dwelt only in caves, whilst, during the periods of internecine feuds, the vanquished were devoured by the victors.

CHAPTER V.

TRACES OF THE ELDER FAITHS.

HE presence of the survivals of an older faith than Christianity in our midst is not readily grasped, and yet the historians of ancient Erin should begin with an account of the races who have occupied it, as well as a description of the faiths which they professed.

Old pagan observances are being rapidly obliterated by social progress and the grim utilitarianism of modern times. The plains through which, as ancient tradition states, Finn Mac Cumhaill pursued the flying chase are now traversed by the locomotive. Many singular customs of the Irish peasantry are but the faint reflected light of the old past; for, although the Christian missionaries did their utmost to stamp out paganism, there remained in the hearts of the people a deeply-rooted fondness for the form of worship in which they had been brought up. It was the religion of their forefathers, and despite the popular idea of the rapid conversion of the island by St. Patrick, yet in almost every district there must have remained some few who clung with pertinacity to the old tenets, and handed them down, from generation to generation, in a more or less mutilated form. To the present day very distinct traces of paganism may be found in the acts of that class styled charm-mongers, herb-, or fairy-doctors. Even

when all traces of Druidism were supposed to have vanished, many of the practices attributed to witches were but reproductions of those formerly ascribed to Druids.

In these superstitions and observances of the peasantry are enshrined strange fragmentary relics of the earlier creeds, sometimes even traces of cannibalistic practices, but their remote antiquity and now but half decipherable implications are, in general, passed unnoticed.

For a lengthened period there was an undefined border-line between Christian and Pagan; there were wavering chiefs who would fain strike a bargain with heaven, and they would accept Christianity if God would grant them victory. So late as the year A.D. 561, at the battle of Cooldrumman, near Drumcliff, county Sligo, St. Columbkille, when praying aloud for the success of his supporters, addressed Christ as 'My Druid,' probably considering that, by thus imploring help from above, he would be understood by his followers. The line between Christianity and Paganism was gradually obliterated by the advancing tide of the new faith, which finally overspread the land; but the superstitions and legends of paganism remained, and in remote and mountainous districts they yet linger, but with ever diminishing strength.

There were also several reactions against Christianity; for example, in some fragments of Irish Annals translated by O'Donovan, it is stated that many of the Irish, in the ninth century, forsook the Christian faith, and joined the pagan invaders in their plundering expeditions.

The gods of ancient Erin have vanished, leaving but faint traces of their former worship. The god, or demigod, Manannan Mac Lir, appears to have been a

tutelary deity of the sea, an Irish Neptune, ruler of the waters, lakes, as well as giant ocean. He has almost disappeared from popular tradition, and is now best known from having left nine daughters, who bequeathed their names to nine lakes. There was also Neit or Ned, the god of war, and Diancecht, the god of medicine. The gods were but deified mortals, celebrities of their day, taken indiscriminately from the three colonies of the Formorians, the Tuatha de Danann, and the Milesians.

It has never been sufficiently borne in mind that the deities of all peoples, with, perhaps, the exception of the Jews, are generally recognized as 'earth-born.' The Olympian hierarchy were but human beings slightly idealised, and endured all the ills of 'suffering, sad humanity.' Their birth-places, pedigrees, histories, and deaths are given by those who adored them as deities. The grave of Zeus was shown in Crete; Apollo was buried at Delphi; and the graves of Hermes and Aphrodite were all anciently pointed out.

Although the gods of Erin have vanished, yet the memory of the goddesses has been retained. In the folk-lore of the peasantry there are still two prominent supernatural mythical beings, one passively benign, the other actively malignant, who hold sway in popular tradition, and who are reputed to reside in some of the rude stone monuments throughout Ireland, and which are named after them. The designation of these survivals is *Calliagh*, i.e. witch or hag; hence the megalithic structures in which they are reputed to dwell are called 'hags' beds.' The Irish-speaking peasant still designates the grand megalithic monuments scattered broadcast over the land *leaba* (pronounced 'labby') *i. e.* the resting-place or bed, understood as grave. The most

imposing of these structures are usually called *leaba-Dhiarmada-agus-Ghrainné*, the bed of Dermod and Grania, this designation being derived from the well-known legend of Dermod O'Dyna's elopement with Grania; but that story evidently took its rise from the word *leaba*, which was understood in its literal sense of 'a bed.'

Prominent in Irish folk-lore are two celebrated 'hags,' Aine or Aynia, and *Bhéartha* (Vera), variously styled Vera, Verah, Berah, Berri, Dirra, and Dhirra. Aynia holds sway in popular tradition, principally in the north of Ireland, whereas the legends regarding Vera are widely prevalent.

Most popular superstitions and legends are found to be of a nature easily explainable. It is a strange, yet well-demonstrated fact, that the deities of one period often become the demons of another; and, in the lapse of years, those that were formerly revered and worshipped become, under a new cult, ill-omened and vindictive. Of this, no better example can be advanced than the transformation of the ancient goddesses, Aynia and Vera, into witches of ordinary type; yet, considering the almost total absence of pagan religious tradition, it is remarkable how stories of these mythical beings have been so widely diffused, and have descended to the present day from remote antiquity. Aynia is represented as passively benign, and, only when provoked, demonstrates her power in an unkind manner. At Knockmany, in the county Tyrone, a remarkable megalithic monument crowning the summit of a hill is, by the peasantry, styled 'Aynia's Cove.' The hill is considered to be a fairy haunt; and woe betide the unlucky wight who should dare to remove the smallest of the stones which now remain of the 'Cove' in

which Aynia, who is reputed to have been elected queen of the 'wee people,' is said to have delighted.

The name Badb (pronounced Bav), signifying rage, fury, or violence, ultimately came to be applied to a witch, fairy, or goddess, represented by the scare-, scald-, or royston-crow. Ancient Irish tracts, romances, and battle-pieces teem with details respecting this goddess, and her sisters Neman, Macha, and Morrigan or Morrigau, furies, witches, and sorceresses, able to confound whole armies.

Badb would seem to have been the generic title of the beings ruling over battle and carnage—Badb's three so-called sisters representing different aspects of the character of the supreme goddess. Neman afflicted her victims with madness; Morrigan incited them to deeds of valour, strife, and battle; Macha* revelled amidst the bodies of the slain: and all three are described as being wives of Neit, the 'God of Battle' of the pagan Irish. Morrigan has been identified with Arrand or Ana,† evidently the Aynia of popular folk-lore. Thus, even in the present day, the memory of

* 'There is at least one passage in early MS. histories which attributes to the Irish Goddess of Battles the dedication of human heads. A gloss in the *Lebor Buidhe Lecain*, says Professor Whitley Stokes, explains *Machæ* thus:—"The scald-crow; or she is the third Morrigau (great queen); Macha's fruit crop, *i. e.* the heads of men that have been slaughtered." Taking this in connexion with the early practices of the Irish, as recorded by classical authorities, and the practices so frequently ascribed to Irish heroes in legends and traditions and in early MS. accounts, the meaning and significance seems clear enough.'—*Ethnology in Folk-Lore*, p. 148.

† *The Goddess of War of the Ancient Irish.* W. M. Hennessy, *Proceedings R.I.A.*, vol. x., p. 425. At the head of the Babylonian mythology stands a deity named Anu. He reigned over the upper and lower regions of the universe; when these were divided, the upper portion, *i.e.* the heavens, were ruled by him, whilst the lower regions, *i.e.* the earth, were governed by his wife Anatu.

the goddess of the ancient faith is still preserved in popular traditions; and it is strange that these stories should be almost confined to the north of Ireland, where, in early romances, Ana or Aynia watched over the interests of the Ultonians.

Popular tradition bears testimony to former widespread belief in the magical powers of Badb,* the war-goddess. In most parts of Ireland the royston-crow, or the 'chattering grey fennog,' as it is called by Irish-speaking people, is regarded with feelings of mingled dislike and curiosity by the peasantry, who still recite tales of depredations and slaughter in which this bird is represented as exercising a sinister influence. A well-marked distinction is observable in the written as well as current traditions of the country, between the attributes of the scald-crow, or cornix, and those of the raven. The former is regarded not only as a bird of omen, but also as an agent in the fulfilment of what is decreed. The country people will not rob the nest of the cornix, and there is little doubt that the freedom from molestation is traceable to superstitious fear inspired by the badb in ancient times. 'The croaking of the badb was considered to be peculiarily unlucky, more so than the croaking of a raven. In fact, not many years ago, sturdy men, who heard the scare-crow shriek in the morning, would abandon important projects fixed for the same day. Nor is this superstition confined to Ireland alone; the popular tales of Scotland and Wales, which are simply the echoes of similar

* Many places styled Bovan or Bavan, remarks P. W. Joyce, are supposed to have been originally written *Badhbh-dhun*, the fortress of *Badhbh* (bauv). Boa Island, in Lough Erne, is styled by the Four Masters *Badhbha*, whilst the peasantry call it *Inis-Badhbhan*, the island of *Badhbh*.—*Irish Names of Places*, p. 308.

stories once current, and still not quite extinct in this country, contain frequent allusions to this mystic bird.' The comparative mythologist will find a curious correspondence between some of the attributes of the Celtic Badb, and those of the Valkyria of Norse romance. In Irish tales of war and battle, Badb, in the form of this bird, is always represented as foreshadowing, by its cries, the extent of the carnage about to take place. Thus, in an ancient battle story, the impending death of a hero is foretold thus:—

> 'The red-mouthed Badb will cry around the house,
> For bodies it will be solicitous.'

Again—

> 'Pale Badbs shall shriek,'

and whilst describing the carnage of a battle, it is narrated that 'the red-mouthed, sharp-beaked Badb,' croaked over the heads of the heroes.

The more celebrated 'hag' of Irish folk-lore Calliagh Vera is, in popular belief, of huge stature and forbidding mien. According to a tradition current in the county Sligo, she was so tall that she could easily wade* all the rivers and lakes of Ireland, but one day when trying to cross *Loch-da-ghedh*, it proved beyond her depth, and she was drowned; her house on the mountain, near the lake, still remains, and is styled 'Calliagh-a-Vera's House'; this is the denuded chamber of a carn.

* Some of the early Christian female saints seem also to have been fond of wading. Such was the case with St. Araght of Coolavin, in the county Sligo. She was engaged in forming a causeway as a short cut across part of Lough Gara, when a fisherman, observing that the saint possessed a good pair of ankles, approached to obtain a nearer view, whereupon the offended fair one flung down the stones out of her apron, and abandoned her work. This heap, and the unfinished causeway are still pointed out.

At the northern end of the parish of Monasterboice, at the distance of about three miles east of Collon, in the county Louth, there is a large megalithic chamber in remarkably good preservation; it is called 'Calliagh Dirra's House.' This 'house' measures internally twelve feet eight inches in length, by about three feet six inches in width; it is rectangular in form, and lies due east and west, the entire structure being covered with four large flag-stones; it presents a typical example of a chamber or cist, in contradistinction to the true cromleac.*

A short distance inland from Credan Head, and about two miles north of Dunmore East, county Waterford, is a rocky hill called Carrick-a-Dhirra; on its summit is an ancient Pagan sepulchre consisting of five cists, arranged in an east and west direction, the longer axis of each cist being north and south; the monument was originally surrounded by a circle of stones. The monument is styled 'Carrick-a-Dhirra,' or the 'Giant's Grave'; and it bears a striking resemblance to that described by V. Du Noyer,† situated in the parish of Monasterboice, county Louth, and called 'Calliagh Dirra's House,' that mythical being, so well known in Irish folk-lore, who gave her name to the Lough Crew Hills, *i. e.* Slieve Calliagh,‡ the site of the most wonderful megalithic sepulchral remains in Ireland, as also most probably to 'Hag's Head,' in the county Clare. In some parts of Ireland she is now looked upon as a banshee, and makes her appearance before the death of members of some well-known families. It

* *Journal R.H.A.A.I.*, vol. v., N.S., pp. 497–501.
† *Ibid.*, 2nd series, vol. i., p. 498.
‡ *Ibid.*, 3rd series, vol. i., pp. 160–2.

is narrated that on one occasion she turned the celebrated hero of antiquity, Finn Mac Cumhaill, into a decrepid old man, but his soldiers dug through the mountains of Slieve Gullian, in Armagh, until they drove her out of a cave, in which she then had her residence, and forced her to restore Finn to his former strength and symmetry. Under the shadow of the Slieve Gullian range there is an enchanted lake styled by the peasantry 'Lough Calliagh Berri.' Probably the foregoing story is an allegory. Finn may have omitted the performance of some superstitious rite appertaining to the worship of the goddess, or he may have quarrelled with the Druids and defied them, and after some time, having got the worst of the conflict, made his peace with the offended goddess and her priests. Other legends make Calliagh Vera of Tuatha-de-Danann descent, and give her another name, Evlin (Eiblín). P. W. Joyce remarks that 'Aeibhell (Eevil), or more correctly Aebhinn (Eevin), whose name signifies "beautiful," was another powerful banshee, and presided over north Munster.

It is narrated in an Irish MS. that the Dalcassian hero, Dooling O'Hartigan, on his way to the battle of Clontarf, was met by Eevil (or Aeibhell), the guardian spirit of the Dalcassian warriors, who endeavoured to dissuade him from going to the fight, predicting that he would indubitably be slain. She proffered him pleasures and long life would he but remain away. The warrior replied that nothing could induce him to abandon his friend in the day of battle. Eevil then cast around him a magical cloak, which rendered him invisible, and warned him that he would certainly be slain if he threw it off. In the heat of the conflict he forgot this warning, and he was, according to the prediction of the goddess, instantly slain.

In the same battle the Irish king, Brian Boru, then of great age, was urged by his attendants to retire, but replied: 'Retreat becomes us not, and I know that I shall not leave this place alive, for Eevil of Craglea appeared to me last night, and told me that I should be killed this day.'

Thus in this semi-historical tale, two heroes, who were presumably Christians, are depicted as placing implicit faith in the powers of one of the old heathen deities.

Originally every family possessed its own particular banshee, *i.e.* the spirit of one of its ancestors who always appeared to announce the approaching decease of any member, by its weird wailing.

> 'Anon she pours a harrowing strain,
> And then—she sits all mute again!—
> Now peals the wild funereal cry
> And now—it sinks into a sigh!'

The banshee, however, finally became aristocratic, and only attached itself to celebrated families. Now belief in its existence is fast fading away, and in a few more years it will be only remembered in legends of the marvellous.

'Cliodhna (Cleena) is the potent banshee that rules as queen over the fairies of south Munster; and you will hear innumerable stories among the peasantry of the exercise of her powerful spells. . . . . In the Dinnsenchus there is an ancient poetical love story of which Cleena is the heroine, wherein it is related that she was a foreigner, and that she was drowned in the harbour of Glandore, near Skibbereen, in Cork. In this harbour the sea, at certain times, utters a very peculiar deep, hollow, and melancholy roar among the

caverns of the cliffs, and which was formerly believed to foretell the death of a king of the south of Ireland; and this surge has been from time immemorial called *Tonn-Cleena*, Cleena's Wave. Cleena had her palace in the heart of a great rock, situated about five miles south, south-west from Mallow; it is still well known by the name of Carrig-Cleena, and it has given name to two townlands.'*

A legend of the hero Cuchullin recites that, being pursued by a *calliagh*, or witch, he ran southwards towards the ocean, until, finding himself literally 'between the devil and the deep sea,' he sprang from a headland on to a rock in the ocean, closely followed by the witch; then with a superhuman exertion he sprang back to the mainland; but the hag having attempted the same feat, jumped short, fell into the flood, and was drowned. The body of the witch carried northward by the current, drifted ashore at the southern point of the cliffs of Moher, hence called Cancalee, or the Hag's Head. On one of the most south-western points of Ireland a singular conformation of rock is worn by the incessant beating of the billows into a grotesque resemblance of the human profile. The waves, however, are not suffered to claim undisputed this rude sculpture as their own; a different origin being attributed to it by the legends of the country. These tales relate to a malignant hag, or witch, who, for her misdeeds, was transformed into stone, doomed

* *Irish Names of Places*, pp. 194–5. On the subject of the ancient goddesses of the Pagan Irish the late J. O'Beirne Crowe states that the gentile Irish had foreign deities; for example, he equated the above-mentioned *Cliodhna*, or *Clidna*, with the Gaulish *Clutonda*. See *Religious Beliefs of the Pagan Irish: Journal R. H. A. A. I.*, 3rd series, p. 319.

to remain there, lashed by the raging billows of the ocean.*

On the hill of Carrick, overlooking the river Boyne, there is a rock denominated the 'Witch's Stone,' which stands upon its northern brow. The legend attached to it recounts that a witch hurled this boulder from the hill of Croghan at some early father of the Church, but missed his reverence, and the boulder fell where it is now to be seen.

Legends are still recounted amongst the peasantry of immense carns, tumuli, megalithic monuments of various descriptions, cashels, and even of the comparatively modern round-towers being erected in the course of one night by a calliagh, or hag. A megalithic structure near Dundalk—figured in Wright's *Louthiana*, and in the *Archæologia*—is styled by the country-people *Fags-na-ain-eigh*, i.e. the one night's work; the immense carn at Heapstown, county Sligo, and many similar remains are styled *Fas-na-hannihy* — the growth of one night; the story is in fact universal throughout Ireland.

Meendacalliagh, in the Parish of Lower Fahan, County Donegal, signifies 'the mountain flat of the two hags': there is a locality near Monasterboice styled 'the Witches Hollow'; and a point of rock, near Youghal, jutting into the river Blackwater, is styled *Sron-caillighe*, the 'hag's nose,' or promontory.

A supernatural being styled Grian is reputed to have been buried in various localities; for several megalithic

* The legend may be seen in *Bentley's Miscellany*, vol. i., pp. 519–524. Amongst the Greeks disappointed lovers ascended the promontory of Leucate, and from thence precipitated themselves into the sea. Some of them, however, escaped from the effects of the fall.

monuments, in different parts of the Kingdom, are still popularly known as her last resting-place.

The legend which transforms Grian from a beautiful and charming young woman into an ugly vindictive old witch, relates that five young warriors, sons of a chief named Conall, attacked the 'fairy mansion' of Grian's father and destroyed the place. To avenge this act, the sorceress transformed them into badgers. When Conall heard of the fate of his sons, he set out to fight the enchantress. Grian addressed him in a conciliatory speech, but when he unguardedly came close to her, she vanquished him by means of a withering spell.

The name of the Castle of Carrigogunnell, on the banks of the Shannon, is understood by the peasantry to mean 'the rock of the candle'; and to account for the name, a legend is narrated by them of a witch named Grana, who long ago lived on it, and nightly lighted an enchanted candle; whoever beheld its rays died before the morning's sun arose.

In the townland of Carrigmoorna, County Waterford, there is a conical hill, crowned by a large rock, in which dwells the enchantress Murna. When the wind blows strongly in certain directions it produces in some crevices of the rock a loud roar, and the country people state that this sound is the humming of Murna's spinning wheel.*

To one who believed himself under the influence of these malignant beings, misfortunes were not the result of accident; sickness was intensified by pangs of mental anguish. His cattle did not die of natural disease, but

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* *Irish Names of Places*, p. 5; second series, pp. 133, 236: P. W. Joyce.

were victims of blighting spells; his corn was not laid by the action of winds and rain, but by the tramplings of furious fiends, belief in whose existence was at one time almost universal; and expounders of primitive belief, by pretending to control the acts of these terrible beings, gained complete ascendency over the minds of the credulous multitude. It is quite possible that these goddesses or witches were not originally supposed by their worshippers to be malevolent, but when Christianity invaded and captured their territories, their disposition towards their former worshippers was imagined to have changed, and they plagued the people —or at least were thought to have done so—to wreak on them vengeance for their change of faith.

It appears evident that the malignant beings styled Hags and Witches are but degenerated representatives of the goddesses of the ancient Irish, whilst the fairies are representatives of an aboriginal and conquered people. Some of these fairies are, however, of a jovial disposition; an artificial mound in the County Sligo, frequented by these beings, is styled *Sidhean-a-ghaire*, 'the fairy mound of laughter,' and, according to P. W. Joyce, there are several places in Tipperary and Limerick, called by the scriptural name Mount Sion; but mount is only a translation of *cnoc*, and Sion an ingenious adaptation of *sidhéan* (*sheeawn*), a fairy mount; the full Irish name being *Cnoc-à-tsidheain* (*Knockateean*), fairy-mount hill.*

O'Curry, in his *Lectures on the Manuscript Materials of Ancient Irish History*, divides the fairies into two distinct classes, *i.e.* the *bonâ fide* fairies or demons, and the race of the Tuatha De Danann, who, after being

* *Irish Names of Places*, p. 42.

conquered by the Milesians, transformed themselves into fairies.

In the North of Ireland, fairies appear to have been of larger stature and more uncouth than elsewhere. 'In the County Antrim, the fairy called *Grogan*, is a hairy fellow, low in stature, with broad shoulders, and "desperately strong."'

On a stormy day, the eddies of dust raised by the wind along the roads were regarded by the peasantry as occasioned by a fairy cavalcade travelling from one rath to another, and the same marks of respect were observed towards the invisible horsemen as if the dust had been occasioned by a company of the most exalted persons of the land. Some would throw tufts of grass, pieces of sticks, or even small pebbles into the centre of the dust eddy, not as an insult, but as an offering to appease the 'good-people.' The same superstition prevails in the East.

The fairies were objects of a strange fear, and the amount of mischief ascribed to them in the imagination of the peasantry was wonderful, considering the very diminutive stature assigned to them; like Puck they were said to—

> 'Skim milk, sometimes labour in the quern
> And bootless make the breathless housewife churn.'

They were supposed to issue by moonlight from their underground dwellings, and disport themselves on the green sward of the raths:—

> 'But woe betide the wand'ring wight,
> That treads its circle in the night.'

The fairies, however, are not always given to amusement and gaiety. Very often the tiny inhabitants of

two neighbouring forts quarrel, and sanguinary conflicts ensue. 'These encounters,' remarks P. W. Joyce, 'always take place by night; the human inhabitants are terrified by shrill screams and other indescribable noises; and in the morning the fields are strewn with drops of blood, little bones, and other relics of the fight.'

In short, 'the good people' are everywhere:—

> 'By the craggy hill-side,
> Through the mosses bare,
> They have planted thorn-trees,
> For pleasure here and there.
> Is any man so daring
> As dig them up in spite,
> He shall find their sharpest thorn
> In his bed at night!'

In the earlier stages of human civilization, no distinction is made in the savage mind between supernatural beings who have never been 'cabin'd, cribb'd, confined' within a mould of clay, and the spirits of the dead; the line of demarcation which now separates fairies, and similar emanations of the human mind, from the souls of men has been the gradual outcome of Christian teaching, for the philosophy of savages mingles them together; indeed it seems entirely foreign to the mind of primitive man to conceive the idea of a beneficent spirit. The characters they ascribe to the spirits are unconscious reflections of their own natures; their spirits use the same artifices, and have to be overcome by the same means, as would be employed in earthly contests.

The keystone of this description of religion is fear: fear of the unseen, of the unknown. This feeling was probably the moving principle underlying the worship

of the ancient Irish. From his appearance into this world until his exit from it, one of these old heathens was probably as completely enslaved by his superstitions as is an American Indian by his 'medicine-man,' who, in sickness or in health, in peace or in war, looks for guidance and counsel to an arrant impostor, 'who combines in himself the functions of priest, prophet, and physician.'

The only supernatural beings or spirits the primitive savage believed in or feared, were the dead who had belonged to his own tribe, although about these he had no definite belief, but only an all-prevailing dread. The spirits of the dead of another tribe, however, would be considered inimical. There was no great distinction between good and bad spirits; they possibly varied in proportion to the characters borne by them when in the flesh. It is therefore a great advance when spirits are divided into two classes, the good and the malign; a still greater advance is made when they further develop into beings of an altogether superhuman character, who for convenience may be described as gods and demons.

Fear of the living preserves the social framework, fear of the unseen preserves the religious framework of society. The fear betrayed by a child, when alone in the dark, and the fear with which an uneducated person passes by a churchyard by night, demonstrates the still continued sentiment which seems to have been the primal element of most primitive religions. The savage worships what, to his mind, conveys an idea of fear or dread; but the custom of worshipping what contributes to his wants and necessities is also frequently met with amongst uncivilized races. 'In India,' writes Dubois, 'a woman adores the basket

which serves to bring or hold necessaries, and offers sacrifices to it, as well as to the rice-mill and other implements that assist her in her household labours. A carpenter does the like homage to his hatchet, his adze, and other tools, and likewise offers sacrifice to them. A Brahmin does so to the style with which he is going to write; a soldier to the arms he is to use in the field; a mason to his trowel; and a labourer to his plough.'

There is considerable similarity between the folk-lore current in the East and that still existing amongst a large portion of the population—more especially in remote localities. The Celtic mind is essentially eastern in character, and legends still current illustrate this. Some present a beautiful fancy; for instance, we have the ancient Irish romance of 'The Children of Lir' metamorphosed into swans, and anyone acquainted with Lough Erne cannot have failed to note the swans which, at almost every season of the year, are seen upon its bays and inlets. They come and go scathless; for, in the minds of the Celtic peasantry they represent the souls of holy women that had fallen victims to the fire and sword of the Northmen who swept over Lough Erne again and again. This is a very good example of a Pagan legend being completely Christianized.

In a statistical account of the parish of Ballymoyer, County Armagh, written in 1810, the Rev. Joseph Ferguson states that a girl, chasing a butterfly, was chid by her companions, who said to her, 'that may be the soul of your grandfather.' Upon inquiry it was found that a butterfly, hovering near a corpse, was regarded as a sign of its everlasting happiness. This is a curious instance of the lingering on of a Pagan superstition.

After death, the soul is supposed at first to remain in the form of a butterfly in the neighbourhood of the body, and then to follow it to the grave. The Bulgarians hold that it assumes the form of a bird or a butterfly, and remains on the nearest tree until the funeral is over. The Servians believe the soul of a witch often leaves her body whilst she is asleep, and flies abroad in the shape of a butterfly. The same idea prevails in some of the islands of the Pacific. The idea that the soul assumes this shape is therefore by no means confined to Ireland.

There were numerous authenticated examples of the widespread custom adopted by Christians on the Continent, especially at Rome, of devoting to Christian uses monuments, such as temples or tombs, that had been anciently Pagan; and this system was in primitive times extensively followed in Ireland. Thus, pillar-stones were consecrated to the New Faith by engraving on them the sign of the Greek Cross. If we are to believe the later-written Lives of St. Patrick he found the people worshipping pillars, some of which he caused to be overthrown, but the majority appear to have been re-consecrated to the new worship.

Survivals of stone-worship are extremely interesting. There are many examples from ancient Greece; similar instances occur in almost all early religions, and they are still preserved in folk-lore. The Kaffirs, a tribe of the Hindu-Kush, say of the stones they worship:—'This stands for God, but we know not his shape,' therefore they leave the rock untouched by chisel.

An old Icelandic author states that, into a certain island in one of the Irish lakes, no female of any animal, including the human species, was allowed to enter.

This rule seems to have been enforced not only in Ireland, but in various parts of Europe. Curson, in his *Monasteries of the Levant*, states that: 'No female animal of any sort is admitted on any part of the peninsula of Mount Athos; and since the days of Constantine the soil of the Holy Mountain has never been contaminated by the tread of a woman's foot.'

Moore has immortalized this idea in the legend of Glendalough, where Saint Kevin hurls Kathleen into the waters for daring to intrude on his meditations, yet—

> 'Soon the saint (yet ah! too late)
> Felt her love and mourn'd her fate.'

St. Senanus also inexorably hunted away the fair sex:—

> 'But legends hint that had the maid
> Till morning light delay'd,
> And given the saint one rosy smile,
> She ne'er had left his lonely isle.'

The exclusion of women from so-called sacred localities is a practice far older than Christianity. They were excluded from the Temple of Hercules at Cadiz, in Spain; the Romans also excluded women from their temples of Hercules, the reason for which is given by Plutarch and by Macrobius. Irish examples could be multiplied to any extent. The monks of Inniscathy Abbey — from its foundation to its demolition — are said never to have permitted a woman to enter the island.

In an island, near Achill, there is a Holy Well at which 'no female would be allowed to draw off the water until it would be first handed to her by a male, be it even an infant whose hand she should place within

her own in laying hold of the vessel when drawing.' It may be afterwards used for the usual purposes of every-day life.

According to an ancient legend the river Shannon originated from the profanation of a sacred Pagan well by a woman.*

In many localities men and women were not allowed to be buried in the same cemetery, and it is an almost universal belief that if a woman be buried in the men's ground the corpse will be removed during the night, by unseen hands, to the women's cemetery, and *vice versâ*.

Holy wells in Ireland may be divided into two classes, those which derive their reputed virtues from Pagan superstition, where—

> 'The nimble-footed fairies dance their rounds,
> By the pale moonshine, dipping oftentimes
> Their stolen children, so to make them free
> From dying flesh and dull mortality.'

And those springs that were converted from Pagan to so-called Christian uses. In the alleged ecclesiastical canons of Edgar, it is ordered 'that every priest forbid well-worshippings, &c.'; and heathenism is elsewhere defined as the worship of idols, 'the sun or moon, fire or rivers, water-wells, stones, and forest trees.' Although many holy wells, in a greater or less degree, have now lost their sacred character, they are still numerous; probably there cannot be less than three thousand throughout Ireland. In Christian times, holy wells were resorted to for purposes of prayer, or to

* O'Curry's *Manners and Customs of the Ancient Irish*, vol. ii., p. 144.

perform certain penances, either voluntary or imposed. This is evidently a survival of the old heathen adoration of 'water-wells.'

Illustrations of this process may be found in modern times. Mr. Eugene Stock, as reported in *The Guardian*, 30th May, 1894, speaking of the 'unholy accommodation of Christian truth and observances to heathenish superstitions and customs,' tells us that 'in China and Japan the paraphernalia of Buddhism have proved most convenient. Temples, shrines, altars, bells, holy-water vessels, censers, rosaries, vestments, all were ready for transfer from one religion to the other. Images of Buddha, with a slight application of the chisel, served for images of Christ, and the roadside shrines of Kwauyn, the goddess of mercy, were easily adapted.' The same speaker quotes Miss Gordon Cumming's work on Ceylon:—'She has seen the very identical devil-dancers engaged from the temples of Siva to accompany the processions alike of heathen gods and of images of Christ and the Virgin; she has seen the images of Buddha opposite the image of the Virgin in the same chapel, and apparently receiving equal adoration; she has seen Hindus, Buddhists, and Christians paying their vows together at the Shrine of S. Anna, by whom certain miracles were believed to have been wrought.' With the process here visible before us we can see how heathen customs and ideas would become cultivated in popular Christian usage.

It may be argued that the 'holy well,' which still is supposed to effect cures of diseases, is the material outcome of a connecting link in the chain of primitive thought extending from Pagan times. Doubtless in those early days, enthusiastic missionaries sought to wean the natives from paganism by admitting such of

their existing customs as to the Christian mind appeared harmless; so that if we subtract what appears to be the result of distinctly mediæval Christianity from the ordinary so-called superstitions of the peasantry, the residuum is pure paganism. Wells were the haunts of spirits that proved to be propitious if remembered, but were vindictive if neglected, and hence no devotee approached the sacred precincts empty-handed, the principle being no gift no cure: therefore the modern devotee when tying up a fragment from the clothing, or dropping a cake, a small coin, or a crooked pin into the well, is unconsciously worshipping the old presiding spirit of the place.

A curious remnant of Paganism is the manner in which a peasant always approaches these holy localities. This must be from the north side, and he must move from east to west, in imitation of the diurnal motion of the sun; a corpse should be carried to its last resting-place, a bride approach her husband, an infant be carried to the baptismal font, and the glass circulate around the festive board in the same manner: hence the proverb; *Cuir an gloine thart fa dheas*, *i.e.* send round the glass to the south, such being the right or lucky way, and the opposite being the wrong or unlucky way. The hands of clocks and watches turn from east to west like the sun; we deal round playing cards in the same fashion. Thus, is ancient thought found crystallized in modern custom.

Martin describes the custom as existing in the Hebrides. In *Cormac's Glossary* the spirit of poetry, in the form of 'a young man, kingly, radiant,' is stated to have met Senchán Torpeist, 'and then he goes sunwise (*desiul*) round Senchán and his people.' Formerly when starting on fishing expeditions the crews of the

boats were very careful that their craft should leave the shore in a direction sunways.

In 'Waverly' Sir Walter Scott describes how the old Highlander, called in to attend the wounded Edward, walks around the patient three times, from east to west, according to the course of the sun, and this ceremony was considered a matter of the utmost importance towards effecting a cure.

This ceremonial turn, styled *Desiul* by the Irish and Scotch, is well known, and has its warrant in the usages of classic antiquity. From left to right has ever been the processional order; to go to the left is tantamount to a malediction, and is called 'withershins.' Implicit belief in the efficacy of the *Desiul* was, at one time, rife throughout the kingdom. Allusion to this ceremony is thus made by Dr. Joyce in his *Irish Names of Places:* 'Tempo in Fermanagh, which is called in Irish *an t-Tompodh deisiol* (an timpo deshil) *iompodh* meaning turning, and *deisiol*, *dextrorsum*, from left to right. The place received its name, no doubt, from the ancient custom of turning sunways, *i.e.* from left to right, in worship.' If the peasant wishes to curse his enemy he proceeds 'withershins,' *i.e.* in the reverse order from *Desiul*, and the reversal of all ceremonies at a military funeral may possibly be a remnant of this custom of 'withershins' or the unlucky way.

Toland, in 1815, thus describes it:—'The vulgar in the islands never come to the ancient and fire-hallowing carns, but they walk round them from east to west, according to the course of the sun. This sanctified tour or round by the south is called *Desiul* (*dextrorsum*), as was the unhallowed contrary one by *tuapholl* (*sinistrorsum*)'; this latter was *geis*, *i.e.* unorthodox, or, as O'Donovan defines the expression,

a thing or act forbidden, because of the ill-luck which would result from its doing.

Perhaps the oldest Irish written description of the *Desiul* occurs in the 'Book of Ballymote,' where it is recorded that a celebrated poet, King of Leinster, had a magical well in his garden, to which no one, save the monarch and his three cup-bearers, could approach without being instantly deprived of sight. The queen, determined to test the mystical powers of its waters, not only approached the well, but passed three times round it to the left, as was customary in ancient incantations. Upon the completion of the third round, the spring burst forth in a raging torrent, and three enormous waves dashed over the hapless queen, who was thus carried right out to the ocean.

Of all the ceremonies appertaining to Druidical worship, none is so easily traced back to its origin as that of the *Desiul*. One more example will suffice. Before the battle of Cooldrumman, fought near Drumcliff, county Sligo, in the year 561, St. Columbkille, in his prayer before the contest, denounces his adversaries for employing Pagan rites to assure victory, and anathematises—

> '. . the host which has taken judgment from us,
> A host that marches round a cairn,'

i.e. performs the *Desiul*. By the strange irony of fate the saint's manuscript of portion of the Holy Scriptures —the origin of the conflict, hence styled the *Cathach*, or 'book of the battle'—became the battle-standard of the *Cinel Conaill*, and an old Irish MS. recounts that before a fight 'it was proper the *Cathach* should be carried round the army,' and further, that if 'carried three times to the right around the army of the *Cinel Conaill* at

going to battle, it was certain they would return victorious.'*

The late Sir Samuel Ferguson wrote a most instructive article 'On the Ceremonial Turn called *Desiul*.' It, however, mostly deals with extracts from classic writers, demonstrating that the *Desiul* was an act of worship also amongst the Greeks and Romans, for 'classical and gentile antiquity abounds with evidences of some kind of rotation forming part of the ceremonial of religious worship.'

Hyginus relates that: 'Arge, a huntress, while pursuing a stag, said:—"Although thou followest the course of the sun, yet will I follow thee"; at which the Sun, being displeased, changed her into a doe.' Arge's offence appears to have been that she referred, in a profane manner, to the *Desiul*, or act of solar adoration.

Plutarch relates that Marcellus, when leading the Roman legions against the Gauls, and in the act of advancing to the assault, 'his horse terrified with the shouts of the Gauls, turned short and forcibly carried him back. Marcellus fearing that this, interpreted by superstition, should cause some wonder in his troops, quickly pulled the rein, and, turning his horse again towards the enemy, paid his adorations to the sun, as if that movement had been made, not by accident, but design, for the Romans always turn round when they worship the gods.' Plutarch elsewhere remarks that 'the turning round in adoration is said to represent the circular motion of the world.'

When it became customary to pay divine honours to the Cæsars, they were approached with veiled head,

* *Lectures on the MS. Materials of Ancient Irish History*, Eugene O'Curry, p. 330.

the suppliant turning round, and then prostrating himself. The most apposite quotation that can be advanced is one from Lucretius, which may be thus translated :—

> ' Call it not Piety that oft you're found
> Veiled, at the standing-stone to make your round.'

In a comedy by Plautus, one of his characters says: ' Which way to turn myself I know not'; the other jestingly replies : ' If you worship the gods, right-hand-wise, I apprehend,' whilst Valerius Flaccus, in describing a marriage ceremony relates that :—

> ' Pollux advanced the nuptial torches' ray,
> And ritual water, while in holy round,
> Right-hand-ways they together tread the ground.'

There still exists a survival of a remarkable ceremonial employed by the ancient Irish for anathematizing their enemies. The poet Spenser had intended to treat ' more at large ' of the semi-pagan social customs of the Irish, ' of their old manner of marrying, of burying, of dancing, of singing, of feasting, of cursing,' &c.; and it is to be regretted that he never carried this idea into execution. O'Donovan thus defines the effect of a well-delivered curse :—' The belief among the ancient Irish was, and still is, that a curse once pronounced must fall in some direction. If it has been deserved by him on whom it is pronounced, it will fall upon him sooner or later, but if it has not, then it will return upon the person who pronounced it. They compare it to a wedge with which a woodman cleaveth timber. If it has room to go, it will go, and cleave the wood; but if it has not, it will fly out and strike the woodman himself, who is driving it, between the eyes.'

There is an ancient homely proverb that 'curses, like chickens, come home to roost,' and the dread of retribution of this nature inspires such an amount of awe as to prevent rash anathemas.

A peculiar Pagan manner of cursing, though now rapidly dying out, prevailed at one time amongst the Irish-speaking population of Fermanagh. The ceremony, styled the 'Fire of Stones,' is primitive, simple, and original. The individual who is desirous of cursing his enemy, collects as many small boulders as will cover the hearth-stone of his cottage; these he piles up as he would arrange turf for making a fire. Then dropping on his knees he prays that, until the heap before him burns, every description of misfortune may befall his enemy and his enemy's family to untold generations.

A number of oval or circular stones may be observed around the margins of holy wells, together with numerous white pebbles scattered over the bottom, whilst on some altars overlooking the well are numerous, globular, oval, and curiously wrought stones.

Stones of this class are believed to possess miraculous properties for healing sickness, and they were used for swearing on, and also as maledictory stones. The late Sir Samuel Ferguson thus alludes to the latter object to which these articles were applied:—

> 'They loosed their curse against the King,
> They cursed him in his flesh and bones,
> And ever in the mystic ring
> They turned the maledictive stones.'

Near the shores of Lough Macnean, not far from the village of Blacklion, in Fermanagh, is 'St. Bridget's Stone,' a globular-shaped boulder, and its table-like surface displays nine cavities. Each of these depressions

contains a stone, smooth and oval, which nearly fills the depression. Ceremonies of some description were formerly carried on around it, when it was commonly known as 'the Cursing Stone.' Upon the various altars in the island of Inismurray (fig. 17), off the coast of Sligo, may be noticed collections of these globular stones, a few of them ornamented with what may be styled early Greek crosses; whilst in the townland of Ballysummaghan, and

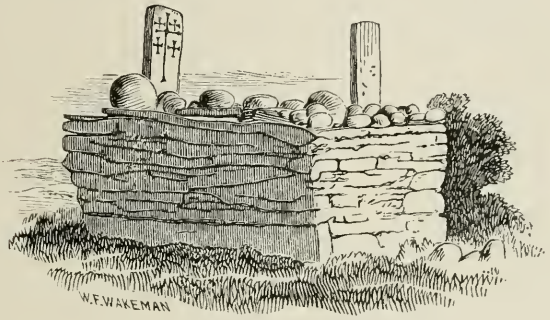

Fig. 17.—Altar with Cursing Stones, Island of Inismurray.

in that of Barroe, in the same county, there were originally stones used for the purpose of cursing. The ceremony appears to have closely resembled that observed on Inismurray, but in addition the postulant was required to go through the ritual, bare-footed and bare-headed. One mode of averting the curse was for the person against whom 'the stones were turned' to have a grave dug, to cause himself to be laid in it, and to have three shovelfuls of earth cast over him, the grave-diggers at the same time reciting certain rhymes.*

* For an example of this grave-digging ceremony, see *Early Races of Scotland*, vol. i., pp. 79-82; also Pitcairn's *Criminal Trials*, vol. i., pp. 192–204.

In the island of Iniskea adjoining that of Achill there used to be, and probably there still is, a cursing-stone at the mouth of a holy well. Anybody who wanted the immediate gratification of vengeance must go to the stone, 'turn it round three times and pray that his enemies might not prosper, or get length of life; and their means would melt away like snow before the sun, their days would be shortened till in the end they would get a miserable death'; in fact it is a stone that 'would put an end to bad people in a short time.'

Close to the old Castle of Rinvile, near Salrock Harbour, is a holy well held in great veneration, called Tobar na preacht n-ingean, where the people perform their devotions. Here they formerly had a a stone called leac na preacht n-ingean, which was used as a 'cursing-stone.'*

A missionary who settled on the eastern side of the Island of Tanna, New Hebrides, could not build on the site he would have selected, as it was sacred ground, on which were deposited stones in which the natives supposed the spirits of their departed relatives to reside. On Vati Island are still to be observed a collection of stones and rudely-cut shells, which, when the missionaries first arrived, were the only form of gods the natives possessed, and into which the spirits of their departed friends or relatives were supposed to enter. Most of the stones were ordinary smooth water-worn boulders, three to four inches long, and from two to three inches in diameter. Similar stones were reverenced by the Karens, the Boroditch Islanders, and the Fijians. Several tribes

* *Chorographical Description of West or H-Iar Connaught*, p. 120.

of the Pacific, chip these stones to permit, as they think, the spirits they contain, to have free exit and entrance, whilst others, in addition, smear them with oil.*

Several Irish specimens have circular indentations sunk in them.

May not the same ceremonies that prevailed in the East, and still prevail in the islands of the Pacific, have obtained in Ireland?

These stones are turned from left to right when praying, but from right to left when cursing.

At a site called 'The Relig,' near Bruckless, close to St. Conall's Well, on the northern side of Donegal Bay, there is a most interesting relic of paganism—a healing medicinal or magical stone of St. Conall. It is dark-brown in colour, about five inches long, three inches thick, and in shape and size somewhat like an ordinary 'dumb-bell.' The stone probably owes its pecular form to the action of water, to which also may be attributed three small hollows on one portion of the shaft. When not in use, it is kept in a hollow of a broken cross on the summit of the carn at 'the Relig,' and is regarded with the greatest reverence. The sick person has the stone conveyed to his house where it is retained until the cure is effected; then it is returned to its resting-place. There is no custodian, but when borrowed, notice is given to the people living near, and to return it to its original place is a matter of duty. It has for centuries had the reputation of curing diseases; it is even alleged that the stone was once sent to America to cure a native of this portion of Donegal who had emigrated and desired to utilize its healing powers; possibly the patient

* *The Principles of Sociology*, Herbert Spencer, vol. i., 3rd ed.

had not faith in the medical skill of the physicians in the land of his adoption. The stone was honourably returned.

On the altar at Toomour, in the Co. Sligo (fig. 18), is a natural fragment of rock, or fossil, resembling a dumb-bell in shape, and very like the healing stone of St. Conall; on the wall behind the altar are seventeen globular stones, designated 'dicket stones' by the peasantry. The well of Toberaraght (fig. 19), in the half barony of Coolavin, Co. Sligo, is surrounded by a low

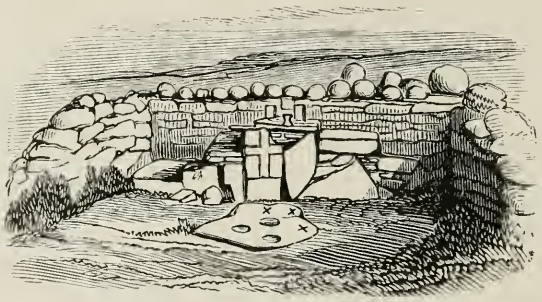

Fig. 18.—Altar at Toomour, with 'Dicket' Stones.

wall, on the top of which are placed thirteen round water-worn pebbles. This well is reputed to cure diseases.

Lying on the ground in the graveyard of the old church of Killery, county Sligo, is a thin flagstone (fig. 20), and at its *south-eastern* corner there is a small rectangular stone projecting about six inches above the surface of the soil; at all times may be seen around it a piece of string called the 'straining string,' which is supposed to be an infallible cure for strains, pains and aches. The believer repairs, either by self or deputy, to

the flagstone, on which lie seven egg-shaped stones, and removes from the 'straining-stone' the old string; re-

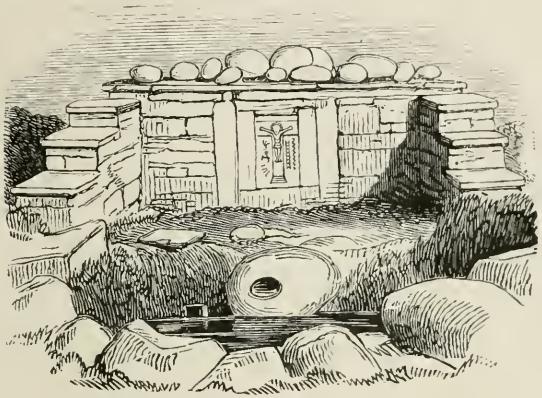

Fig. 19.—Altar at Toberaraght, with Globular Stones.

placing it by a new one, whilst repeating certain prayers before each stone—swung round from left to right as

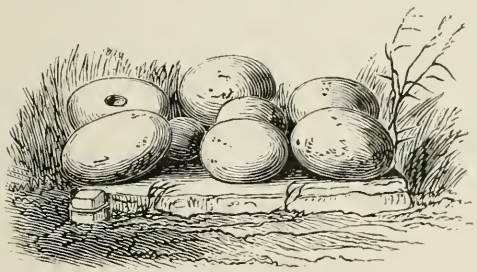

Fig. 20.—Straining Stone, Killery.

on a pivot— is turned in succession, being held between the thumb and second finger of the suppliant's hand.

A similar custom prevails in some of the islands off the western coast.

By degrees, the point is reached where the lithic object is entirely removed from its hallowing surroundings, though it possesses certain definite powers, as for instance 'doctor-stones,' still used in many parts of Ireland. One very celebrated specimen was located in the neighbourhood of Oughterard, Co. Galway; it was in great request there, and also in the neighbouring portion of the Co. Mayo. It was considered unlucky to keep it in a house, and those who used it hid it until it was again required. Another 'doctor-stone' belonged to a family who resided in the County Wicklow; the eldest male member of the family was said to be able to effect cures by its means.

The Garnavilla amulet is a crystal ball set in a bronze frame with a loop for suspension. It is frequently borrowed by the country people of the neighbourhood, as an antidote to disease in cattle. It is suspended from the loop, round the neck of the beast, and drops into the food as the animal stoops to eat. The Imokelly amulet and the Ballyvourney murrain-stone may be also instanced.

Mary Queen of Scots appears to have been a firm believer in the efficacy of healing stones, for on the eve of her execution, when writing to her brother-in-law Henry the Third of France, she bequeaths to him 'two rare stones, valuable for the health,' asking him to accept them 'in token of true love towards him.'

We see then that great veneration, subject to certain conditions and ceremonials, appears to have been paid by the ancient Irish to certain inanimate objects and materials; in nothing is this so remarkable as in the

lithic objects which were used for the purposes of prayer, for cursing, and for the cure of ailments.

Truth is often stranger than fiction, and this latter popular Irish charm, or cure, has been transplanted from its native land, and has taken root and flourished on the American continent. An Irish emigrant to Texas had a 'Madstone,' reputed to be a perfect remedy for hydrophobia, and which effected several cures. It would be interesting to know how the 'Madstones' were employed in Ireland as a 'cure,' and if any are now so used. A charm for farcy which had been employed for generations by a family in the Co. Limerick, is now used, by a member of that same family, on the horses in a great ranching country within the shadow of the Rocky Mountains, in the north-west territory of Canada.

Throughout Ireland there are many traces of the former custom of praying to, or asking certain gifts or favours from, a lithic object, or from a well. On the summit of one of the pinnacles of Tormore, on Tory Island, a large stone is shown by the natives who call it 'the wishing stone.' They allege that whoever stands on this stone, and turns round three times, will obtain whatever he wishes for.* 'Wishing-Wells' are to be met with in most counties; the wisher, on bended knee, and with hands clasped behind the back, takes a draught, and then silently wishes, but it is essential that the supplicant should not make known his wishes till they are granted.

The immediate *entourage* of a celebrated and much frequented holy well is at all times festooned with many coloured rags, red, blue, green, white, black—in

* *Ulster Journal of Archæology*, vol. i., p. 112.

fact, kaleidoscopic in character—tied up, to denote in a more modern sense, a finale to the 'rounds' and prayers, but which, if the action of attaching them to the trees or bushes be analysed, has a deeper and more mystic meaning. If there are no trees or bushes, brambles will do as well, and failing even these, a weed or strong stalk of grass is deemed sufficient. The rags are to be met with everywhere in the vicinity of these springs, in the old churchyard, beneath the shade of trees, on the open mountain slope, in the secluded glen, or on the busy village green.

The rag or ribbon, taken from the clothing, is viewed somewhat in the light of a scapegoat, and is considered to be the depository of the spiritual or bodily ailments of the suppliant; this is exemplified by an anecdote related of a vindictive peasant, who took the rags from the bushes around a holy well and scattered them on the highway, along which a neighbour, against whom be bore ill will, was in the habit of passing, with the hope that he might pick them up, and thereby become possessed of all the maladies with which they were stored.* Rags are not merely offerings, or votive, they are riddances; thus if you have a headache, you take a shred and place it on the tree, and with it you place the headache there; the putting up of these rags is a putting away of the evils impending or incurred by sin or otherwise—an act which should be accompanied by the ritual word: 'By the intercession of the Lord, I leave

* It is alleged that the inhabitants of the Orkneys for a similar purpose wash a sick person, and then throw the water on to the highway, in the belief that the sickness will be transferred from the patient to the first person who passes over the spot. In some parts of Scotland parings from the nails of the sick, or a small portion of their hair are placed in a packet and left on the road; the passer-by who picks it up will forthwith have the malady transferred to him.

my portion of illness in this place.'* Travellers in the East mention trees and bushes festooned with rags fastened as offerings to the branches; a similar custom prevailed in Scotland.

A few descriptions of these wells† in different parts of the kingdom, are given as examples of this wide-spread survival of Pagan observances.

The well of Toberkeelagh, situated on the western shore of Lough Mask, is overshadowed by a tall tree and bushes, on which pieces of rag are suspended. These mementos are not always rags; portions of hair are frequently left, and the silvered locks of age may often be seen fluttering in the wind with the fair tresses of some youthful votary. When sickness afflicts any of the peasantry in the neighbourhood of Toberkeelagh, or even any of their cattle, it is usual to pray, or perform 'stations,' for their recovery at the holy well. It is held in such great respect by the people that none of them will pass by without 'making some reverence.'‡

In the year 1855, a visitor to the well of St. Bartholomew, at Pilstown, Co. Waterford, thus describes its appearance:—The venerable thorns which overshadow it, bore a motley appearance, being covered

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* Ꞁiꞃ ımpıꝺe ꞁn ꞇıġeꞃnꞁ mo cuıꝺ ꞇınneꞁꞃ ꝺo ꝼꞁꞅꞁım ꞁın ꞁn ꞁıꞇ ꞃo.

† These wells often contained trout or salmon. Trout were considered holy, and were not eaten, but salmon, under certain circumstances, were eagerly sought after. Holy trout of peculiar form and colour were confined to holy wells, whilst the hazel tree and the salmon seem to have been indissolubly connected with certain large springs. The salmon eagerly watched the nuts on the hazel, and when they dropped into the water devoured them greedily. Their bellies became spotted with a ruddy spot for every nut they had eaten; on this account the spotted salmon became an object of eager acquisition, for whoever eat one became immediately, without the trouble of studying, a learned scholar or an eloquent poet.

‡ *Journal R.H.A.A.I.*, vol. i., 4th series, p. 349.

with red, blue, and green ribbons and rags, as if torn from the dresses of pilgrims, and tied up as a finale to their 'rounds' and prayers. An old crone engaged in going her 'rounds,' said that 'they were tied up by each, to leave all the sickness of the year behind them.'

In a 'statistical account' of the parish of Dungiven, written in 1813, it is stated that at the well of Tubberpatrick, after performing the usual rounds, devotees 'wash their hands and feet with the water, and tear off a small rag from their clothes, which they tie on a bush overhanging the well; from whence they all proceed to a large stone in the River Roe, immediately below the old church, and having performed an oblation they walk round the stone bowing to it, and repeating prayers as at the well. Their next movement is to the old church, within which a similar ceremony goes on, and they finish this rite by a procession and prayers round the upright stone.

St. Conall's Well, near Bruckless, in the county Donegal, is situated, less than a mile from the sea, in a lonely part of the rather wide glen through which the Corker river flows. 'The well,' writes W. H. Patterson, 'is surrounded by a low wall of uncemented stones. It is now small and shallow, but the spring is copious, and the overflow forms a small rill, which flows down the sloping ground to the bottom of the glen. No thorn tree overshadows the little basin, but the brambles which grow over and around it have their branches decorated with rags and shreds of various colours, fragments of clothing, &c., some fresh as if placed there but yesterday, others bleached and faded by the sun and rain.'*

* *Journal R.H.A.A.I.*, vol. i., 4th series, p. 467.

At the proper season can still be seen devotees making their tour round the well of Tubbernalt, on the shore of Lough Gill, not far from the town of Sligo. The spring is encircled by a wall of rude masonry, access to it being given by a few uneven steps, and

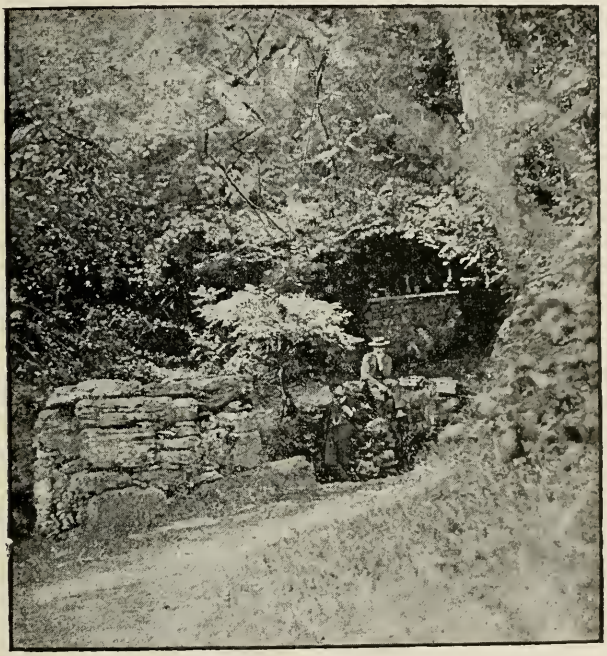

Fig. 21.—Well and Altars, Tubbernalt.

below this spring there is another. Against the overhanging alt or cliff is built an altar, and on Garland Sunday it is gaily decorated with flowers. On either side may then be seen two small framed glasses. Can this be a remnant of the Pagan rite probably alluded

to by the Apostle when he says 'now we see through a glass darkly'? Fragments of cakes, pins, and nails may be seen in the well at certain periods, and the locality is at all times festooned with many coloured rags, red, blue, green, white, black, tied up to denote a finale to the rounds and prayers.

A rite, probably the most pagan in character still exercised in connection with a holy well, is that connected with Tobernacoragh, or the 'Well of Assistance' on the island of Inismurray (fig. 22).

When tempestuous weather prevails, communication between the island and the mainland is sometimes rendered impracticable even for weeks. On such occasions, the waters of the spring are drained into the ocean, upon which—the charm rendered doubly certain by the repetition of certain prayers—a holy calm succeeds the strife of the elements.

Wells could produce a favourable breeze as well as allay a storm. When a strange boat was wind-bound on the Island of Gigha, the master of the craft used to give money to one of the natives to procure a favourable wind, and the practice, as here carried on, closely resembles the ceremony on the Island of Inismurray. 'A few feet above the well was a heap of stones, forming a cover to the spring. These were carefully removed, and the well was cleared out with a wooden dish or clam-shell. The water was then thrown several times towards the point from which the needed wind should blow. Certain words of incantation were used each time the water was thrown. After the ceremony the stones were replaced, as the district would otherwise have been swept by a hurricane.'*

* *Folk-lore of Scottish Lochs and Springs*, p. 223.

The ceremonies attached to these wells are but the remnant of Druidical cult, for the Druids appear to have claimed the power to make or withhold rain, to dry up rivers, or to cause springs to burst forth. There is a good example of this in an Historical Tale in the *Book of Leinster*. It is the story of an expedition made by Cormac Mac Art against the King of Munster. The scene is laid in the commencement of the third century. The King of Ireland consults his Druids as

Fig. 22.—Well of Assistance, Island of Inismurray.

to the best and most expeditious means of bringing the men of Munster to terms. The Druids informed the monarch that the surest mode of reducing his enemies was to deprive them and their cattle of water, and forthwith, by their spells and incantations, they dried up all the springs, rivers, and lakes of the district.

In this extremity, the King of Munster called to his assistance a yet more powerful Druid than any in the service of the Irish monarch. Upon receiving the promise of a large reward, this arch-Druid consented to go to the King of Munster's relief. Upon his arrival the Druid shot an arrow into the air, foretelling

that water in abundance would spring up wherever the missile descended; and a rushing torrent burst forth where the barbed head entered the earth. If anyone doubt this story he has but to visit the parish of *Imleach Grianan* in the county of Limerick, where the well designated 'the Well of the Great Spring' still remains.*

The area over which well-worship extends is of surprising magnitude, and it is impossible to believe that so singular a custom could have arisen independently in all these countries. General Pitt-Rivers states that:—

'Burton says it extends throughout Northern Africa from west to east; Mungo Park mentions it in W. Africa; Sir Samuel Baker speaks of it on the confines of Abyssinia, and says that the people who practised it were unable to assign a reason for doing so; Burton also found the same custom in Arabia during his pilgrimage to Mecca; in Persia Sir William Ouseley saw a tree close to a large monolith covered with these rags, and he described it as a practise appertaining to a religion long since proscribed in that country'; in Ceylon, Colonel Leslie says that the trees in the neighbourhood of wells may be seen covered with similar scraps of cotton; and Huc, in his travels, mentions it among the Tartars.

Like many other pagan nations, the old Irish invested even the lowest forms of animal life with the power of influencing the actions of men. This 'totem' worship is an advance on the veneration of stones, &c.; it endows animals or birds with thought and language—

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* *The Manuscript Materials of Ancient Irish History*, Eugene O'Curry, pp. 271–2.

regarding them as human beings under a different exterior; thus, in course of time, they become endowed with supernatural powers; they become the ancestors of the tribe, and finally their protecting gods. Traces of this cult are still apparent amongst the aborigines of America and Australia; whilst animal worship in ancient Egypt was probably a survival of this strange custom.

There was in Ireland an ancient belief that certain races or families were endowed with the power of assuming the form of wolves whenever they so pleased. In the 'Annals of the Four Masters,' it is gravely recorded that, in the year 690, a wolf was heard speaking with a human voice. When thus transformed they committed depredations amongst flocks and herds, after the manner of wolves; if their human bodies, which their spirits quitted on these expeditions, were moved, the spirit would not be able to again enter them; if wounded whilst abroad, the same wounds would be apparent on their human as on their wolfish bodies; and, if killed, the raw flesh they had been tearing in the fields would be found between the teeth of the dead human bodies.

Witches assume the form of hares, and whilst thus transformed are subject to the same conditions as individuals changed into wolves.

A multitude of places throughout Ireland are named after cattle; legends upon the subject of 'cow-lore' are current amongst the peasantry; and stories relating to bulls, cows, and calves, are interwoven with Irish fairy-mythology, and interest chiefly from their topographical references. Several of the early Irish saints were credited with the possession of magical cows. Cattle-raids and forays afford fruitful themes for early romances,

the most celebrated production being the 'Táin bó Cuailgne,' or the Cattle-raid of Louth, the so-called Nibelungen Lied of Irish history. It has been remarked that even the celebrated abduction of Dervorgil partakes, when examined by the light of modern investigation, more of the nature of a cattle-foray than a romance, or love-passage between an Irish princess, aged 44, and a king then in his 62nd year. According to tradition, the Druids held the bovine species in veneration. One of the traditional roads of ancient Erin runs not far from the village of Ballyvodock, near Cork; it is called 'the Road of the White Cow,' a mystical animal that appears to have risen from the sea, walked one day through Ballyvodock on to Foaty Island, and drank at Lough-na-bo. The road runs over the hills to Glanmire, near Cork, and, according to tradition, off to the County Limerick. By popular folk-lore the origin of this, and other magical roads, is described as follows:—One May-eve, long ages ago, about an hour after midday, three enchanted cows suddenly emerged from the sea at Imokelly. The first was white; the second red; and the third black. They kept in company for about a mile; then the white cow went north-west towards the county Limerick; the red cow went to the westward and passed around the coast of Ireland; the black cow going north-east towards the county Waterford. These roads are still pointed out in many places, and are known as 'The White,' 'The Red,' and the 'Black Cow's' Road. One celebrated cow, called Glasgavlen, is remembered in tradition all over Ireland; and there is throughout the kingdom hardly a county which does not possess a lake or well in which lives an enchanted cow which at certain times appears above the waters.

The following legend seems to point to the former sacred character of the cow :—'Many years ago a native of Inismurray, with envy and hatred in his heart, stole out one night, and feloniously slew, by stabbing, the cow which was the chief support of a neighbouring family. The blood of the milk-giver, thus cruelly slaughtered, flowed, it is said, in every direction, and upon congealing, instantly quickened and became transformed into mice ; these animals ultimately proved a nuisance on the island.'*

The black pig, or boar, is a legendary animal, whose deeds and death form a fruitful subject for the *shannachies* or tellers of stories of almost every county in Ireland. In oral legends we find the heroes of antiquity slaying magical boars in various parts of the kingdom. There are strong indications in tradition and folk-lore that in ancient times the boar was held in great dread, or, perhaps, in great estimation. One writer even goes so far as to say that the prominence given to the animal in topographical nomenclature and legendary tales 'suggests the idea that the boar may have been identified with that system of animal worship which we have some reason for believing once existed in this country.' Kemble states that, among the Germans and Anglo-Saxons, swine were sacred animals. A track, styled 'the Road of the Black Pig,' commences near Athlone, passes through the Co. Roscommon, and can be traced as far as the Curlew mountains in the Co. Sligo.

It is alleged that the Druids foretold future events, amongst other means, by observing the movements of birds. The cuckoo is associated with ideas of divination ; for the first time in spring that the listener hears

* *Inismurray and its Antiquities*, W. F. Wakeman.

it, in whatever quarter he is then looking, in that quarter he will live during the next year; and if he has money in his pocket he will never be without it during the year. Many other instances of the importance attached to the appearance and movements of birds might be given; that of the wren shall here suffice.

The wren was an object of superstitious veneration amongst the Pagan Irish. In *Cormac's Glossary* the word *drean*, *i.e.* wren, is explained as *draoi-en*, a druid bird, a bird that makes a prediction. From hence is probably derived the saying 'a little bird has told me.' In a life of St. Molaing, it is recounted that, as the saint was reading a book, the *magus avium*, so called 'because to certain individuals it furnishes auguries, came flying to him.' A bird which was an object of respect to the Druids became, almost of necessity, an object of aversion to the Christian priesthood; and the triumphant religion signalised its ascendancy by endeavouring to extirpate any object which appeared to resist it: for in striving to effect the destruction of 'the king of all birds,' the priests wished to deal a death-blow to the superstitious science of augury.*

In an ancient poem, attributed to St. Columbkille, and translated by O'Donovan,† it is evident that the saint alludes to this kind of divination:—

> 'It is not with the *sreod* our destiny is,
> Nor with the bird on the top of the twig,
> Nor with the trunk of a knotty tree.
> . . . . . .
> I adore not the voice of birds,
> Nor the *sreod*, nor a destiny on the earthly world,
> Nor a son, nor chance, nor woman,
> My Druid is Christ, the Son of God.'

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* *Ulster Journal of Archæology*, vol. iv., pp. 171–2.

† *The Miscellany of the Irish Archæological Society*, pp. 12–13.

Knowledge of the medicinal properties of the flowers, herbs, and roots of the country was possessed by the Druids to a greater extent than is generally supposed, and even weapons poisoned with vegetable decoctions were, it is alleged, employed. The common foxglove is said to have been one of the most potent herbs used by the Druids to increase the efficacy of their charms. To the 'medicine men' of America we owe the discovery of the properties of many drugs. An American 'medicine man' has some knowledge of the human and animal anatomy, and an Irish Druid was probably equally skilful. Simple ailments are relieved —as was the case formerly in Ireland—by the heat of the 'sweat-house,' but in diseases of a graver type the 'medicine man' falls back upon his power as an exorcist. With drum, rattle, and chant he seeks to expel from the sick man the malignant spirit which has seized upon him. The seat of pain is ascertained, and the after-treatment exactly resembles that of the present Irish 'herb doctor.' The 'medicine man' sucks the spots affected by the pain with such severity as to raise blisters, and these may often, by the counter-irritation thus excited, effect a cure ; but if this fails he next pretends to spit out of his mouth frogs, thorns, stones, or anything the credulity of the sick man may accept as the origin of the disease.

Many legends yet recount the miraculous cures effected by the great Irish physicians, or 'medicine men,' of pagan times. The most widely known of all these celebrities was Diancecht of the Tuatha de Danann race—afterwards regarded as the god of physic. At the second battle of Moytura he prepared a medicinal bath and endued it with such sanative powers that the wounded warriors who were plunged into it emerged

healed and restored to strength. Many ages before the Christian era, a king of Leinster was hardly beset by a neighbouring and hostile tribe, which used poisoned weapons. His Druid advised him to have a bath prepared before the next battle, consisting of the milk of one hundred and fifty white and hornless cows. As fast as the king's men were wounded they were plunged into the fluid, from which they arose perfectly healed. It is thus apparent that the idea of the existence of an elixir of life is of very ancient date in Ireland.

Amongst the Old-Norse, life was figured as a tree. Many large solitary growing trees were held in veneration by the people; under some of them their chiefs were inaugurated, or periodical games celebrated, and they were regarded with intense veneration.*

'Billa,' which signifies a large tree, was the term used when describing them; they are now called 'Bell' and 'Bellow Trees'; and absurd stories, founded on these designations, may be heard recounted of their origin. Tree worship was probably the same in Erin as practised elsewhere; and Mr. Grant Allan sums up thus:—'I do not mean for a moment to assert, or even suggest, that every individual sacred tree, grows, or ever grew, on the grave of a dead person; but I do mean to say that, so far as I can see, the notion of the sanctity of trees, or plants, could only have arisen, in the first place, from the reverence paid to trees or plants which actually sprang from the remains of the dead, and so were regarded—like everything else that came out of the tomb—as embodiments or avatars of the dead man's

* 'There exists abundant evidence of the fact that in ante-Christian days, natives of Erin, in common with those of the British Islands generally, were wont to worship certain trees, rocks, pillar-stones, and springs.'—*Inismurray and its Antiquities*, W. F. Wakeman.

spirit.' 'In the parish of Ockley some graves have rose-trees planted at the head and foot, *i.e.* they planted a tree or a flower on the grave of their friend, and they thought the soul of the party deceased went into the tree or plant.' *

O'Donovan goes so far as to state that 'every place in Ireland bearing the name of *creeve* had originally a sacred tree of widely extending branches, planted for the purpose of inauguration, or to commemorate the death of some famous personage.' Sacred fires were, no doubt, often kindled under these trees, as there are many localities named Billatinny, or the 'old' or 'sacred tree of the fire.'

The rowan, or mountain-ash, is still popularly supposed, in country places, to have a peculiar virtue against the attacks of fairies, witches, or malign influences. Bishop Heber, in his *Journey in India*, states that he 'passed a fine tree of the mimosa, resembling greatly, at a distance, the mountain-ash. A sprig of this tree, worn in the turban, or suspended over the bed, is supposed to be a perfect security against all spells and the Evil Eye. The superstition which, in the British Isles, attaches to the rowan tree is here applied to a tree of nearly similar form.'

The thorn also was probably regarded as sacred; for when they occur solitary, near the banks of streams, or on 'forts,' they are considered to be the haunts and peculiar abode of the fairies, and as such are not to be disturbed without risk, sooner or later, of personal danger to the person so offending. From the custody of the fairies they are often transferred to that of the saints. 'Skeagh Patric,' or 'Patrick's Bush,' is an aged

* Aubrey's *Remains of Gentilisime*, p. 155.

thorn growing out of a cleft in a rock from under which a stream of water flows; it is situated near Tinahely in Wicklow. Devotees, principally women, attend here on the 4th May; the penitential rounds are duly made about the well, and shreds are torn off their garments and hung on the thorn.

Bands of mummers used to make their appearance at all seasons, but May-day was their favourite and proper festival. This strange custom, a relic evidently of some pagan processional rite, is described by T. Crofton Croker in his *Fairy Legends*. A troup of May-day mummers consisted 'of a number, varying according to circumstances, of the girls and young men of the village and neighbourhood, usually selected for their good looks, or their proficiency; the females in the dance, the youths in hurling and other athletic exercises. They march in procession, two abreast, and in three divisions; the young men in the van and the rear, dressed in white or other gay-coloured jackets or vests, and decorated with ribbons on their hats and sleeves; the young women are dressed also in light-coloured garments, and two of them bear each a holly-bush, in which are hung several new hurling balls, the May-day present of the girls to the youths of the village. The bush is decorated with a profusion of long ribbons, or paper cut in imitation, which adds greatly to the gay and joyous, yet strictly rural, appearance of the whole. The procession is always preceded by music; sometimes of the bagpipe, but more commonly of a military fife, with the addition of a drum or tambourine. A clown is, of course, in attendance: he wears a frightful mask, and bears a long pole, with shreds of cloth nailed to the end of it, like a mop, which ever and anon he dips in a pool of water or puddle, and besprinkles such

of the crowd as press upon his companions, much to the delight of the younger spectators.' In this procession we find a tree, or holly-bush, decorated with ribbons, a clown with a pole, representing probably *Leaghaun* worship, together with the introduction of a water-rite.

Thus, it will be seen that tree, stone, and well-worship are intimately connected.

It may be interesting to point out that Keating, in his *History of Ireland*, explains the change in name of three of the chiefs of the Tuatha De Danann by stating that they were called, instead of their proper names, Maccuill, Maceacht, and MacGreine, because the idols they severally worshipped were distinguished by these names. Maccuill adored, for his deity, a log of wood (*cuill*); Maceacht worshipped a ploughshare (*ceacht*); and MacGreine chose, for his god, *Grian*, the sun. However, all the Irish gods were not inanimate objects of nature; and although Dr. Todd, in his *Life of St. Patrick*, is of opinion that the Irish had no knowledge of the gods or the feminine deities of the classic world, under any Celtic designations, yet there can be little doubt but that many of them, under ancient Gaulish or Iberno-Celtic names, may often be recognized in ancient Irish legends.

A description must not be omitted of a remarkable rustic procession which, not very long ago, used to perambulate yearly the district between Ballycotton and Trabolgan on the eve of Samhain, *i. e.* the 31st of October.

The processional rite is undoubtedly of Pagan origin, and announces facts in a manner which at present is barely intelligible. The principal characters posed as messengers of a being styled the 'Muck Olla,' in whose

name they levied contributions on farmers. They were accompanied by a number of youths, blowing cows' horns; at the head of the procession was a man, enveloped in a white robe, or sheet, and bearing a rude representation of a horse's head. This personage was called the *Lair Bhan*, 'the white mare,' and acted as president, or master of the ceremonies. At each house where the procession halted, a long string of verses was recited; in the second distich two expressions occurred, savouring strongly of Paganism, and which would not have been permitted to be elsewhere publicly uttered; the other verses purported to be recited by a messenger of the 'Muck Olla,' and set forth that, owing to the goodness of that being, the farmer, whom they addressed, had been prosperous, that the prosperity would continue as long only as he was liberal in donations in honour of the 'Muck Olla'; the verses concluded by giving a very unfavourable description of the state into which the farmer's affairs would fall should this being visit him with the vengeance certain to follow any illiberal or churlish treatment of his followers. Whether owing to the charm of the poetry, or the cogency of the appeal, contributions were, in general, on a very liberal scale: every description of agricultural product was bestowed—milk, butter, eggs, corn, potatoes, wool, &c. A rural retailer awaited the return of the procession, and purchased the offerings at market value. The share of each person in the procession was then distributed according to previous arrangement.

These scenes were enacted at night. The question arises, Could the original 'Muck Olla' have been a deity exhibited, as in Egypt of old, as a living animal? Can the rural merchant be a representative of some druid who maintained his ground long after the estab-

lishment of Christianity?* To enter, however, at full on an analysis of this strange processional rite would lead to a too long digression.

Irish Proverbs contain many allusions to Pagan beliefs, superstitions, and customs; a few examples may prove of interest. They are here given in English; for the original Gaelic the reader is referred to *The Ulster Journal of Archæology*, vol. ix., pp. 227–9. The raven is believed to predict future events, hence the saying, 'The knowledge of the raven's head.' An enumeration of bad omens is conveyed in the following:—'I heard the cuckoo when I had no food in my belly; the first snail (that I saw) was creeping on a bare stone; I saw a black ram with its hinder parts towards me, so it was easy for me to know that I would not prosper that year.' The ladies of ancient Erin are not complimented in the proverbs—

> 'Do not believe the scald-crow nor the raven,
> Nor any false deity of the women;
> Whether the sun rises early or late
> It is according to God's will this day will be.'

'She has put a *bioran suain* in his head (his hair).' (The *bioran suain* was a magical pin supposed to possess the power of throwing a person into a deep sleep.) Reference to the superstition of the evil eye is conveyed in the warning, 'Take care, lest you cast the evil eye on him.' If a woman, at a funeral, rubbed the earth of a graveyard off her foot, it was believed that her next child would be deformed or 'reel-footed,' hence the saying, 'He has a churchyard crook in his foot.' But the clearest allusion to paganism

* *Transactions Kilkenny Archæological Society*, vol. ii., pp. 308, 309.

occurs in the proverb, 'The front of everything to the south,' alluding to the ceremony of the *desiul*. Formerly, even ploughmen used to turn their horses' heads to the south when yoking or unyoking them.

Examination of the survival of traces of older Faiths than Christianity in Ireland, in the form of national and traditional folk-lore, may conclude with the summary of this interesting subject given by the great Irish scholar O'Donovan:—

'I respect it (national traditional lore) as a great influence that *has been*, and no longer *is*, or *can be*. It fed the poetical flame within the people's mind, and was the parent of true poetry in the more cultivated; it nourished the latent instinctive aspirations of the Irish race, gave them aliment, and directed their movements, and rescued their ancestors from the dominion of brutish ignorance; stirred them up with insatiable thirst for true knowledge, which, when established on a right basis, will raise this ancient and imaginative people to a truly noble standard among the civilized nations of modern Europe: but its office has been fulfilled, it is no longer necessary to the exigencies of modern society, with which the Irish race must either amalgamate or perish. The only interest it can have is a historical and poetical one, and most men will acknowledge that nothing can be more interesting to us in this point of view than the progress of our ancestors from rude primæval simplicity to true civilization and positive science.'

CHAPTER VI.

ARCHITECTURE: LAKE DWELLINGS — CHARIOTS — BOATS.

ARCHITECTURE the first efforts made by the primitive inhabitants of Ireland bear no affinity to, nor imitation of, the characteristic features of the early attempts of any of the Mediterranean nations of classic antiquity, but rather resemble those which are now regarded as belonging to the prehistoric ages. The masonry of these buildings is irregular, formed of rude massive polygonal blocks, not accurately joined, or laid in horizontal courses, and without any kind of cement. Remains of the prehistoric period are numerous, and examples of all varieties of monumental, military, and domestic structures left by the primitive inhabitants, are met with in almost every county.

There are no Pagan or pre-Christian mortared-stone structures in Ireland. In the earliest buildings in which cement is used, *i. e.* in early Christian ecclesiastical architecture, the lime appears to have been made from sea-shells, and even in very modern (*i. e.* Elizabethan) times these would appear to have been utilized, for Docwra mentions, amongst other matters connected with his establishment at Derry, 'cockle-shells to make lyme, were discovered infinite plentie of, in a little island in the mouth of the harbour.'

Thus in Irish architecture, two great divisions present themselves—the earlier, or Pagan, such as the cashel, the beehive-shaped hut, the underground souterrain, the cromleac, the cist, the carn: in these the materials are held together by their own gravity, and mere physical force has, to a greater extent, been used to effect the purpose. To this class the term 'cyclopean' has been rather inappropriately applied. With it there are, it is at present believed, no archaic, ideographic, or merely ornamental designs on the prepared face of stones, and there is no vestige of any kind of architectural adornment by means of dressed or hammered work. Except a few cists, and cist-like sepulchres, nearly all the early structures are circular, and there is a great deal of point in the expression used by Giraldus Cambrensis, when describing the ecclesiastical round towers which he saw, that they were erected *more patriæ*.

The second, or Christian division of architecture, is distinguished from its predecessor by the use of cement in the construction of the fabric; the influence of mind becomes more apparent in the works of a class of operatives whom the popular folk-lore of the peasantry still represents as magicians; whilst the primitive and circular form of the structure is, in general, superseded by the quadrangular.

The grand barbaric fortresses, styled cashels, raised in ages when might was right, were built on sites selected for the wide range of country which they dominated, and they were deemed most eligible, when nearly inaccessible. Provided it was accompanied by defensive characteristics—a high precipice, an overhanging crag, the brink of a sea-washed cliff, the brow of a bleak mountain, an isolated rock, or a promontory,

was chosen—sites so suitable that on many of them were afterwards raised the turreted keep of the Anglo-Norman baron.* Some cashels, however, are to be found in hollows, and surrounded by overhanging heights.

Stone forts, stone huts, artificial caves, cromleacs, and tumuli are found clustered on the south-western hills and cliffs of England, just as we find them abounding on the western mountain sides and cliffs of Ireland. It is alleged, by some antiquaries, that here is proof that those who built, and fought in defence of them, were a race fighting against, and retreating before, an exterminating enemy; that they were finally driven across the Irish sea, found shelter in Ireland for a time, but were at last, it might be said, hurled into the Atlantic. On the other hand, it may be advanced that this primitive race employed simply the materials nearest to hand; on the east coast—clay being readiest—earthen forts and wooden palisading prevailed; this style of architecture—if the term be admissible—gradually changing, overlapping, and commingling, till, in the stony districts of the west, some grand edifices were reared. These primitive architects were 'grim utilitarians,' and adapted themselves, with natural instinct, to their surroundings.

The exterior curve of the wall of cashels is generally composed of blocks of stone of larger size, better selected, and more skilfully laid than those composing the interior curve. The wall is not always circular, but sometimes is oval in outline; on other occasions it seems to have followed partially the contour of the

* For a good example see account, with illustration, of Rahinnane Castle, Co. Kerry, *Transactions Kilkenny Archæological Society*, vol. iii., pp. 394–397.

ground on which it was built. Both sides have a slight slope inwards, so that the base of the wall measures considerably more than the summit; the interior face is provided with numerous flights of steps, disposed in

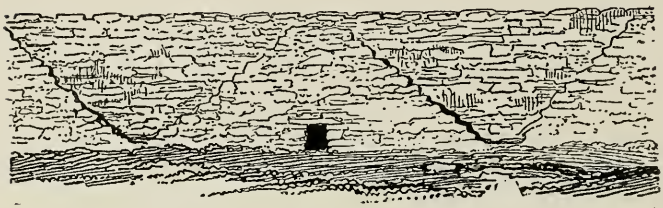

Fig. 23.—Interior face of Cashel wall at Inismurray, showing flights of steps, and low, or 'creep' entrance.

zigzag pattern (fig. 23); and when the wall is very high, or the building of great magnitude, the stairs form a double series of zigzags, or lozenge pattern (fig. 24).

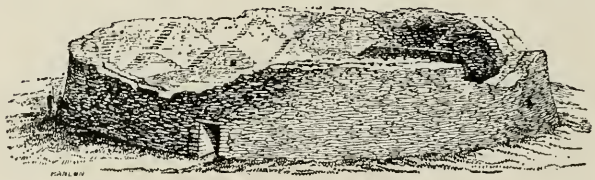

Fig. 24 —View of Staigue Fort, County Kerry, showing double series of steps, from a model in the Museum, R. I. A.

Although there are many larger cashels in Ireland, there are few which afford so perfect an example of the construction of flights of stairs, by which access to the summit of the walls was obtained, as that presented by Staigue Fort in the county Kerry. The wall, in form

nearly circular, is 114 feet in diameter; it is 13 feet thick at the bottom and about 5 feet at the top, which in some places is nearly 18 feet in height.

Attention must be drawn to a striking characteristic of this fort, as noted by an antiquarian, who wrote, in the year 1821, a succinct account of the building. In one part, where the wall was then perfect, it was surmounted, on the inside of the enclosure, by a projecting eave-stone. The stones used in the outside of the wall are not in general so large as those on the inside, and the projecting eave on the inside was obviously intended for ornament. The moat, or fosse, on the outside, encircling the entire building, is described as being 26 feet wide, and 6 feet 3 inches deep.

The primitive type of cashel appears to have possessed several entrances, the arrangements of which deserve more attention than appears yet to have been given to them, as they are almost identical in design with the defensive dispositions observable in souterrains, occurring in the *enceinte* of the earliest fortified positions, and in places which appear never to have possessed a defending wall or rampart of any kind. A description of one entrance will answer for many; there may, in each, be a slight difference in measurements, but the general principles are identical. W. F. Wakeman thus describes one of the primitive entrances to the cashel on Inismurray Island, off the Sligo coast:—

'Advancing from without, you enter the cashel wall by a flat-headed aperture with inclined jambs. The height of this doorway is 2 feet 8 inches; its breadth at lintel, 2 feet; its breadth below is somewhat greater. Passing through a kind of ope or passage about 3 feet in depth, and closed overhead by horizontal-laid flagstones, you enter a dome-covered chamber, the roof of

which is 7 feet above the present level of the floor (fig. 25). About midway in this crypt, which has a diameter of 6 feet, an obstruction, consisting of a nearly perpendicular face of earth, at present 2½ feet in height, is met with. No doubt, if the place were cleared out, the height would be much more considerable, the original floor being probably on a level with the present base of the external entrance, or even lower. The rest of the crypt is a counterpart of that just passed, but, as the sections show, with a floor of higher elevation. This plan of construction is very ingenious, and by its adoption, defenders of the passage would, doubtless, command ample vantage-ground against hostile intruders from without, who could only approach singly. The first comer being disabled or slain, the passage would become blocked, in which case no further advance on the part of the assailants could immediately follow.' *

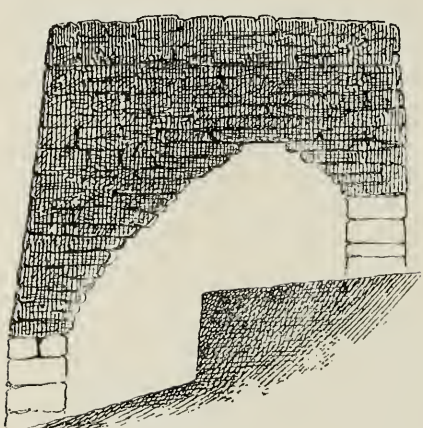

Fig. 25.

Section of low, or 'creep,' entrance, Inismurray Cashel.

The area of some cashels—for example, that of

* *Journal, Royal Historical and Archæological Association of Ireland*, vol. vii., p. 196.

Inismurray, county Sligo (fig. 27)—is separated by stone barriers into divisions of unequal size, and there can be little doubt that they form an integral portion of the fortress as it was originally planned. 'Their use,' observes W. F. Wakeman, 'may have been twofold. Supposing the place carried by an enemy, the defenders would, in these walls, possess admirable bulwarks, from the shelter of which it would be a difficult task to drive them; while they themselves might still be in a position to prolong the struggle, and probably in the end drive away the invader.'*

Through the interior of the walls of cashels there are sometimes short passages leading to diminutive chambers, of a round or oval form; in general, the passages have to be traversed either in a stooping position or on the hands and knees.

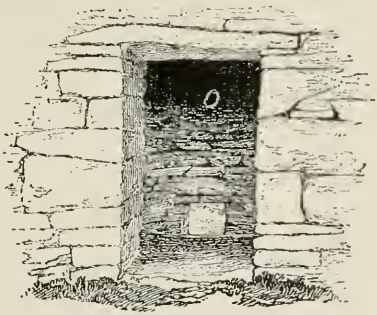

Fig. 26.

Low, or 'creep,' entrance, Inismurray Cashel, as seen from the interior of the *enceinte*. After a drawing by W. F. Wakeman.

Vitrified cashels, or stone forts, have excited great curiosity. It seems to be agreed amongst antiquarians that the people who built these works were ignorant of the use of lime or other cement, and it is not improbable that accidental conflagration may have first given the hint for so peculiar a mode of solidification of a structure. Whether a process like the burning of kelp,

* *Journal, Royal Historical and Archæological Association of Ireland*, vol. vii., p. 200.

or the addition of any particular substance to the part exposed to heat, produced the fusion of the mass is not known; but dry-built stone walls were, by a process of vitrification, rendered a mass of impregnable rock. Though present in Scotland, there seem to be few examples of this curious phenomenon in Ireland. In the parish of Drumbo, county Down, there is a vitrified fort: the stone of which it is composed 'is one easily vitrified by a moderate application of fire,' and it was used, probably from this circumstance, 'in the remarkable vitrified fort of Tullyard.'* On the 27th January, 1851, the Rev. W. P. Moore read a description of the vitrified fort at Shantannon, county Cavan, before a meeting of the Royal Irish Academy, and at the same time he presented specimens of the stone of which the fort is composed.

The Rev. Caesar Otway had previously described this fort. His attention was drawn to it from seeing in a garden a grotto formed of vitrified materials. He visited the site from which they had been taken, and found that the stones forming the foundation of the fort had been subjected to the operation of intense heat, masses of stone being vitrified, and thus cemented together. The enclosure, 34 yards in diameter, presented the indubitable characteristics of a vitrified structure.

The remains of the walls of the fort were formerly much more considerable; much of its materials had been carted away to make the foundations of a neighbouring road; whilst quantities of the vitrified mass had been carried off by the neighbouring gentry to form ornamental rock-work and artificial grottoes. Indeed, to this circumstance we owe the little knowledge of the

* *Ulster Journal of Archæology*, vol. iii., pp. 113, 114.

fort we now possess. To the casual observer it would appear to be an almost obliterated rath; but upon raising the green sod, which almost entirely covered the foundation, the vitrified masses of rock became apparent.*

Vitrified forts have also been found in France. They usually rest on older rock which contains but little lime. The material of which the walls are built consists of granite, gneiss, quartzite, clay-slate, or basalt, according to the locality. The forts of Puy-de-Gandy have been constructed of granite. Specimens taken from the walls show them to have been completely fused on the outside, but the interior still retains the appearance of granite; in some instances, however, the fusion has extended considerably into the masses of rock employed in construction of the *enceinte*. Careful examination demonstrates that this fusion was not always effected in the same way, but that the

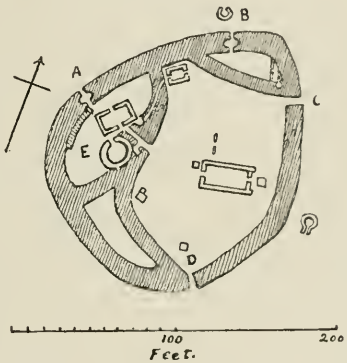

Fig. 27.

Ground-plan of the Cashel of Inismurray.

A, B, Low, or 'creep,' entrances (figs. 25, 26).
C, D, Modern entrances, restored by the Board of Works.
E, School-house (fig. 33).

* *Transactions, R. I. A.*, vol. xiii., pp. 123–127: 'Observations on some Remains in the County of Cavan, supposed to be those of a Vitrified Fort, in a Letter to the Rev. F. Sadlier, D.D., Sec. R. I. A. By the Rev. Caesar Otway.' Read April 28th, 1817.

method varied according to the materials operated upon.

Around the walls of many prehistoric forts on the west coast of Ireland are very remarkable lines of stones, placed, as it were, in companies or battalions, and so planted, it was imagined, for the purpose of breaking the compact rush of an enemy on the fort; such, however, can hardly be their original use, as they are occasionally but a few inches above the surface of the soil; they may, however, have been utilized in keeping entanglements of trees together, and preventing their removal, unless the besiegers subjected themselves to showers of projectiles from the walls. The lines are not straight, but follow more or less the curve of the cashel walls, before which they stand in irregular groups. It has also been suggested that they are of a monumental or mortuary character; but, after examination of all that has been already written on the subject, it may be safely stated that the enigma is still unsolved.

The Grianan of Aileach, commonly called Greenan-Ely,* is situated in the county Donegal, about a mile from the boundary of Derry, and on the summit of a hill 800 feet high, to which has been given the name of Grianan; this hill rises from the eastern shore of Lough Swilly (fig. 28). There are traces of a broad and ancient road, between two ledges of natural rocks, that led to the summit, and passed through three concentric ramparts before arriving at the cashel, or keep, of the fortress. These external ramparts, all in

* Greenan-Ely, *i. e.* the palace of *Aileach*, for Ely represents the pronunciation of *Ailigh*, the genitive of *Aileach*. *Aileach*, another term for a cashel, is derived from *ail*, a stone; and *Aileach* signifies a stone-house, or a stone-fort.—*Irish Names of Places*, p. 292: P. W. Joyce.

FIG. 28.

Ground-plan of Greenan-Ely, taken from the Ordnance Survey of the County Londonderry.

a state of great dilapidation, appear to have been formed of earth mixed with stones. They are of an irregular circular outline, consequent upon their adaptation to the form of the hill which they enclose, and they rise above each other in successive steps or terraces. This circular apex of the hill contains within the outermost enclosure $5\frac{1}{2}$ acres; within the second about 4; within the third about 1; and within the cashel about $\frac{1}{4}$ acre. Between the third or innermost rampart and the cashel the road diminishes considerably in breadth, and diverges slightly to the right. It was originally flanked by a wall on each side, of which the foundation stones alone remain.

In order to judge of the features of this interesting fortress, it is desirable to repeat here the description given of it in the year 1837,* whilst it was yet untouched by modern renovation. At that time the cashel itself, though in a more perfect state than the external ramparts, was still a mere ruin, and at a distance had all the appearance of a dilapidated sepulchral carn. On a closer inspection, however, it presented the characteristics of a circular wall enclosing an area 77 feet 6 inches in diameter, about 6 feet in height, and averaging 13 feet in thickness. The wall was not quite perpendicular, but had a curved slope inwards, like most other forts. Of its original height it was not easy to form a very accurate conjecture; but from the quantity of fallen stones which composed a *talus* on either side, it was estimated that it might have been originally from three to four times its then altitude. On the interior face of the wall, at 5 feet from the base, the thickness is diminished about 2 feet 6 inches by a terrace, the ascent to

* *Ordnance Survey of the Co. of Londonderry*, pp. 217–232.

which was by flights of steps, increasing in breadth as they ascend, and situated at each side of, but at unequal distances from, the entrance gate. It is most probable that there were similar ascents to the terrace in other parts of the wall, as is usual in forts of this description.

On each side of the entrance gateway there are galleries within the thickness of the wall, and extending in length to one-half of its entire circuit. They do not communicate with the gateway, but have entrances at the extremities furthest from it. In the southern gallery, and near its eastern termination, there is a small square recess, with a seat about 18 inches high.

The galleries are 5 feet in height, with sloping sides, 2 feet 2 inches wide at bottom, 1 foot 11 inches at top, and roofed with large stones, laid horizontally. A single gateway leads to the interior of the cashel. It is 4 feet 3 inches wide at base, but only 4 feet of the jambs, which incline inwards, remained in position. The original height to lintel was calculated at 6 feet.

On each side of the entrance passage there is a niche or double reveal, evidently for the purpose of receiving the leaves of a folding-door, as their united measurements are equal to the breadth of the passage.

The stones are, in general, of smaller size on the interior than on the exterior face of the building, the workmanship being similar to that of other Irish cashels.

The stones are of polygonal form, neatly adjusted, and uncemented.*

* In the centre of the area of the cashel were the remains of a small oblong building, constructed with mortar, of comparatively modern origin: it was at one time used as a chapel. There is no other vestige of habitation.

FIG. 29.—General view of Cahernamactierech, showing remains of rampart and bee hive huts. After a drawing by the late G. V. Du Noyer, M.R.I.A. [Reproduced from the *Archaeological Journal*, vol. xv., p. 81.]

The Grianan of Aileach was one of the most remarkable and important works of the kind, being the residence of some of the Northern Irish Kings up to the commencement of the twelfth century. Much has been written about it, and yet it cannot be compared to the cashel of Inismurray, either as regards size or antiquity, judging by the architectural features of both, which are still extant. The Grianan of Aileach possesses only one entrance, and that is comparatively wide and lofty. There are apparently no low entrances, such as are represented, on the northern or Pagan portion of the *enceinte* of the cashel of Inismurray (figs. 25, 26). The depth of the wall on the north side of this cashel is 13 feet; and the stones are larger, better selected, and placed than on its southern front, where it is not more than from 7 to 8 feet in thickness. The differences in architecture are easily accounted for. After the capture, sack, and probable partial demolition of Inismurray cashel by the Danes, it was rebuilt by Christian architects with (so to speak) Christian doorways and inferior workmanship. The Grianan of Aileach is of smaller size, and of comparatively modern Pagan architecture; but it surpasses Inismurray in its imposing position and the extent of its exterior circumvallations.

Cahernamactierech (fig. 29) is one of the principal remains of a collection of prehistoric buildings at Fahan, county Kerry. It is about 100 feet in diameter, and consists of a massive and almost circular stone wall varying in thickness from 11 to 18 feet. The entrance passage leads into a courtyard, about 20 feet square; opposite is a narrow passage, formed and protected at each side by what appears to have been small guard-houses; remains of several other buildings of the beehive type are scattered over the area of the fort.

Cashelore, in the parish of Killery, county Sligo, may be taken as an example of a typical class of fortress, *i.e.* that of a small local chief (fig. 30). It most probably belongs to a comparatively late period: there are no traces of staircases, interior passages, or souterrains (though of course these may exist), but there are vestiges of an outwork which protected the entrance. The wall, built of large stones, is not very wide, and is oval in shape, the outside circumference being 156 feet; interior diameter from east to west 69 feet, from north to south 52 feet.

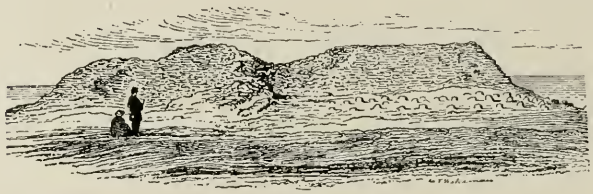

Fig. 31.—General view of the rampart at Dunamoe, looking seaward. To the right are the stone 'palisadings.'

Dunamoe, not far from Belmullet, is a fine example of the remains of a cashel, defended by a wall extending across the neck of the peninsula on which it is situated. The wall is somewhat over 200 feet in length, 8 feet in thickness, and in some places still nearly 18 feet in height. Outside there are remains of a fosse about 14 feet broad, and only one foot deep. Outside this, before the left face of the wall, there are alignments of stones. The sides of the doorway, about midway in the length of the wall, still remain; and on the inside of the wall are three beehive-shaped huts, probably intended for the guard on the gate. On the extreme point of the

To face p. 190.

FIG. 30.

Cashelore, Parish of Killery, County Sligo. Residence of a small chief, occupied in historical times.

headland there are traces of a circular cashel about 100 feet in diameter (see figs. 31, 32).

Many cashels and other pre-Christian structures are now vested in, and are under the control of, the Government; such structures they are bound to conserve, and, if they so think fit, restore. The cashel of Inismurray, however, is a typical example of the manner in which restoration should *not* be made. When the workmen commenced their labours the wall of the *enceinte* was, in many places, nearly level with the ground, but in others it remained from 14 to 16 feet in height. The gaps were built up, but the more elevated parts of the remaining portion of the wall were thrown down, in order to make the level of the summit perfectly regular. On clearing away the superincumbent *débris*, there became observable, at various intervals in the base of the wall, recesses which have been restored as niches or stations, and in which, when completed, were placed cross-inscribed flagstones found in various parts of the enclosure. These recesses are evidently vestiges of the

Fig. 32.

Plan of the fortifications of Dunamoe, showing cashel, and rampart across the neck of the headland.

base of flights of steps, placed at regular intervals in most cashels, for the purpose of enabling the defenders to reach the summit of the wall. The southern entrance to the cashel had been totally destroyed; but, during operations, the lintel was discovered, and the entrance rebuilt, but in such a manner that the ghost of the Firbolg architect may be supposed to wring his hands nightly beside it in despair, lest the nineteenth-century gazers should imagine him to have been the originator of *such* work!

> 'There needs no ghost . . . come from the grave
> To tell us this.'

When the stones become weathered and lichened, it will remain 'a mockery, a delusion, and (probably) a snare' to future inquiring antiquaries. The Board of Works, after restoring the cashel, erected no gate to prevent cattle and pigs from straying into the enclosure and roving through the graveyard, so the islanders blocked up the entrance with several inscribed flagstones. Those who are placed in authority ought to employ properly qualified superintendents able to distinguish between Pagan and early ecclesiastical work; for the cashel was primarily occupied by 'tenants differing widely in thought and habits of life from their successors, the community of Children of the Faith.'

Inside cashel walls are often to be found remarkable and curious structures called clochán, or stone bee-hive-shaped huts. Those constructed in Pagan times differ in two characteristics from those that were erected in later or Christian days. The former are round or oval in shape, and always built without cement; the latter gradually deviated from the primitive type, and assumed a rectangular form, at least at the base, whilst

the use of cement was gradually introduced. A good admixture of Pagan and Christian clochán is exhibited by the collection to be found in the interior of the pre-Christian cashel on the island of Inismurray.

The most remarkable of these buildings (fig. 33) is of circular form; the surface presented by the interior masonry is in fairly perfect condition, but the exterior is greatly dilapidated. The interior is 13 feet in diameter, and about the same in height to the flat stone forming the apex of the vault. The walls, at a short distance

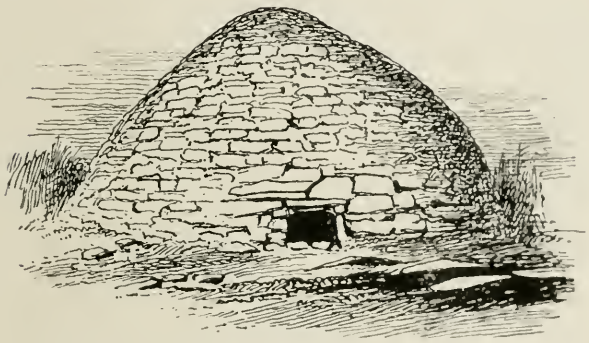

Fig. 33.—Beehive-shaped hut, called the 'School-house,' Cashel of Inismurray.

from the ground, converge inwards until they join at the apex of the roof. On one side of the wall is a projecting bench formed of masonry, probably intended for accommodation of sleepers. The style of the doorway is very primitive; its height is 3 feet 6 inches, its breadth at top 1 foot 9 inches, and at the base 2 feet 3 inches, the inclination of the jambs being very great. This hut is an interesting example of a probable pre-

Christian edifice utilised, according to tradition, as a school-house by the early Christian missionaries to Inismurray.

Roderic O'Flaherty, who wrote a description of West Connaught in 1684, states that the natives 'have *clochâns*—a kind of building of stones layd one upon another, which are brought to a roof without any manner of mortar to cement them, some of which cabins will hold forty men on their floor—so antient that nobody knows how long agoe any of them was made.'

Clochâns of primitive type, however, were erected in some of the remote parts of the western coast, for the housing of pigs and cattle, long after the introduction of Christianity, and, indeed, well on in the present century. The story is narrated of a well-known antiquary who, from the top of one of these modern pigsties, was dilating to his brother-savants on the antiquity of this type of architecture in general, and the specimen on which he stood in particular, until—amidst the laughter of the bystanders—enlightened as to the date of its erection by the builder!

The reader is referred to a most interesting Paper in *The Archæological Journal* (vol. xv.) on the remains of ancient stone-built fortresses and habitations which occur to the west of Dingle, county Kerry; also to the old settlement on Aran Island, styled *Baile-na-scan*, or the village of the ancients, which was disinterred from its sandy covering by the Atlantic gales. According to G. H. Kinahan, the settlement consisted of doons, cahirs, clochâns, *cuocans*, or beehive-shaped stone cells covered with clay; *fosleacs*, or cells built of flagstones placed on edge, and roofed with flagstones; and *ointeghs*, or stone huts not originally roofed with stone. All were devoid of cement.

Petrie gives a drawing and description of an admittedly Pagan clochán, which differs in no respect from those inside the cashel of Inismurray, or from the round or oval houses erected in Pagan times, and of which there are hundreds still remaining, though generally in a more or less dilapidated state. This house, known to the peasantry by the name of *Clochán na carraige*, or the stone-house of the rock, was 'situated on the north side of the great island of Aran, in the bay of Galway, and is in its interior measurement 19 feet long, 7 feet 6 inches broad, and 8 feet high; its walls are about 4 feet thick; its doorway is 3 feet high and 2 feet 6 inches wide on the outside, but narrows to 2 feet on the inside. The roof is formed, as in all buildings of this class, by the gradual approximation of stones laid horizontally till it is closed at the top by a single stone; and two apertures in its centre served the double purpose of a window and a chimney.' Petrie cites from Irish authorities some examples of the resignation of Pagan forts by their owners for the use of Christian communities—notably one occurring in the Life of St. Cuillin, in the Book of Fenagh, where it is stated that the chief of the country of Breffny, on his conversion to Christianity by the Saint, gave up to him his *cathair*, or stone fortress, in order that he might erect his monastic buildings within its enclosure. 'Indeed, in many instances, we find the group of religious buildings within fortresses of the greatest celebrity in Irish history, as in the great fortress of *Muirbheach Mil*, in the island of Aran, erected by a prince of the Firbolgs about the commencement of the Christian era.'* These huts bear a strong analogy to those of the Esquimaux, which are, however, situated

* *Inquiry into the Origin and Use of the Round Towers of Ireland*, p. 446.

partly under ground ; but their temporary dwellings, erected in winter, and formed of blocks of ice, are almost identical in shape with the Irish clocháns.

The permanent huts of the Esquimaux, built of stone, are partly below and partly above the surface of the ground. The entrance is by a long narrow covered passage, so low that a person must creep on hands and knees to get into the dwelling. There are no windows to the edifice, and, as it is deeply sunk in the earth, it rises very little above the surface. The roof, generally covered with sod, partakes so much of the appearance of the rest of the ground that it can scarcely be distinguished from it, as it represents merely a green conical mound. Strange to say, the solitary green knolls by the sea-shore and on lonely moors are, amongst the primitive inhabitants of Orkney and Shetland, regarded as the abodes of supernatural beings designated 'Trows'; they are reputed to have been a race of dwarfs.

Amongst the Esquimaux, several families live in one house. There is always a lamp, made of a hollowed stone suspended from the roof, in which they burn the blubber of the seal, &c. ; this lamp serves at once for light, for warmth, and for cooking.

Castren, a Finnish ethnologist, who travelled much amongst the northern tribes, describes other additional means employed by the Lapps for heating the interior. A fire is lighted, and for a while allowed to burn, then extinguished. The small opening in the centre of the roof was closed, and the hut remained heated by retention of the warmth generated by the fire. The round clochán of the aborigines of Ireland and the hut of the Lapp are almost identical ; both had low, or 'creep,' entrances for the purpose of excluding the cold outer air, and both were unlighted. Some of the Irish under-

ground examples were ventilated from the top, as were also those of the Lapps; in fact, both are examples of the best contrivances for obtaining heat which, in their primitive state, these peoples could have invented.

The hot-air bath, now-a-days designated the 'Turkish Bath,' itself but a degenerated imitation of the luxurious *laconicum* of ancient Greece and Imperial Rome, was in common use amongst the ancient Irish, and lingered on until the commencement of this century. Such a structure is designated by the natives *Teach-an-alais*,

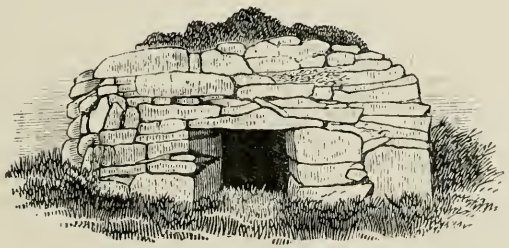

Fig. 34.—'Sweat-house,' Island of Inismurray, County Sligo.

i.e. a 'sweat-house'; many of them yet remain (fig. 34). They were generally of beehive shape, about 6 feet in diameter and 6 feet high, built of converging layers of uncemented stones, covered with clay, and having a low entrance, resembling the remains of stone huts or clocháns, still to be seen in juxtaposition with cashels. The manner of heating the chamber appears to have consisted in filling it with turf, igniting the fuel, and when consumed, the ashes were cleared out, and as soon as the floor and sides of the interior of the construction had sufficiently cooled down, the floor was strewed with green rushes; the person or persons intending to take the bath entered the heated chamber,

and the door was closed by means of a temporary screen. This hot-air bath was much used down to recent times, not only for pleasure, but also as a cure for rheumatism, for which latter purpose it would seem to have been eminently successful. In some cases it is stated that a pool of fresh water, if in the immediate vicinity, was utilized as a plunge-bath for the perspiring bather who, having remained in the heated interior as long as practicable, would then cool himself in the water, and again return.

Russian baths, as used by the peasantry, bear a close resemblance to the Irish method. They usually consist of wooden houses situated, if possible, by the side of a running stream. In the bath-room is a large vaulted oven which, when heated, makes the paving-stones lying upon it red hot, and adjoining to the oven is a kettle fixed in masonry for the purpose of holding boiling water. In parts of the country where wood is scarce, the baths sometimes consist of wretched caverns or holes scooped in the earth, close to the bank of some river. The heat in the bath-room may be much increased by throwing water on the hot stones in the chamber of the oven. The Russian baths, therefore, are also vapour baths; and it appears as if even some of the tribes of American Indians are acquainted with this plan. Lewis and Clarke, in their voyage up the Missouri, thus describe one:—'We observed a vapour bath, consisting of a hollow square of 6 or 8 feet deep, formed in the river-bank by damming up with mud the other three sides, and covering the whole completely except an aperture, about 2 feet wide, at the top. The bathers descend by this hole, taking with them a number of heated stones and jugs of water, and, after being seated round the room, throw the water on the stones till the

steam becomes of a temperature sufficiently high for their purpose.' Sauer, in his account of Billing's expedition, describes the same kind of bath as used in north-western America.

Raths are formed by circular earthen ramparts, formerly surrounded by a deep fosse or ditch, and the remains of these dwellings, in a more or less perfect state, are to be found all over the kingdom. Like the stone fortresses, they are generally placed on commanding situations, but are also found in seemingly most unsuitable positions. In the county Sligo there are upwards of 1800 of these forts, and it has been computed that there are at least 40,000 of them still remaining in Ireland. They were protected from vandalism by the superstitious fears of the peasantry, as interfering with them, according to their belief, entails serious consequences to the investigator. One countryman gravely stated that the child of a well-known antiquary had become 'daft,' owing to the parent having disturbed a rath in the course of his archæological researches.

Some forts possess only a single rampart; others have two, or even three. The ordinary extent of ground enclosed within the circumvallation varies from about a rood to as much as 5 acres. They may be divided into three classes: those probably used merely for the penning of flocks and herds at night, to protect them from wolves and marauders; the fortified residence of the smaller chiefs; and those of the head chiefs, tribal and provincial. The design or ground plan of some of these circular fortresses is peculiar, being arranged in a trefoil pattern like the leaf of a shamrock or in a cable-chain pattern; raths are placed also in couples. In some instances the ramparts have been formed to enclose the ridge surrounding a hollow. Square-shaped earthen

forts are by no means so uncommon as is generally supposed, though it is thought they are not of the same age as the circular examples; some of them occur in Kilkenny, in Queen's County, and doubtless elsewhere also; but the prevalent type of primeval earthworks was circular.

When the construction admitted of it, and water was at hand, one of the most obvious means of strengthening a fort was to flood the external ditch. Whoever is accustomed to examine these ancient structures must be convinced that this plan was often adopted, and not unfrequently the water still remains in the fosse. The names of forts often prove the adoption of this mode of defence. There are, in Ireland, twenty-eight townlands called Lissaniska and Lissanisky, *i.e.* 'the fort of the water.'*

It is curious that the belief, universal amongst the peasantry in Ireland, of these earthen forts or raths being the work of the Danes, is merely an anachronism, for they were doubtless constructed by that race known as Tuatha de Danann, who are fabled to have arrived, in remote ages, as colonists and conquerors. The erection of some of these raths is subsequent to the age of the Ogham-inscribing race; for their architects often utilized, as building materials, the large slabs on which these characters were inscribed, and raths continued to be occupied long after the Anglo-Norman Conquest.

T. O. O'Beirne Crowe states that a good deal has been written on the words *rath*, *lis*, and *dún*—their distinctive and respective meanings. According to this authority, *all three* were required to constitute a royal residence, 'while the *rath*, one or more, and *lis*, which

* *Irish Names of Places*, p. 282, P. W. Joyce.

must be always combined, constitute a non-royal residence'; and he quotes a paragraph from an old Irish manuscript to prove that a king's residence must be a *dún*, and continues, 'the whole place was surrounded with three concentric ridges or circles (raths).'

Rath Croghan, in Roscommon, is, it is stated, the locality in which some of the ancient kings of Ireland—or, at any rate, of that part of Ireland—were inaugurated, and where they held their provincial assemblies. Now these so-called royal residences, Tara and Emania, appear to have been wattled and plastered buildings, and they do not warrant the admiring expressions of some writers; they were, so to speak, temporary structures, built on and surrounded by earthen mounds and ramparts, doubtless palisaded, and otherwise protected from sudden hostile attack.

The track of an ancient road leads up an incline, styled the 'Slope of the Chariots,' to the ancient remains situated on the Hill of Tara, which consist of a collection of earthen mounds and a few scattered boulders. The chief object of interest is the so-called banqueting-hall, a deep excavation with parallel sides, composed of earthen embankments, in which occur a number of gaps, corresponding (according to some writers) to the doors which led into the great Hall. The longer axis of the building was north and south, 360 feet in length by 40 feet in width.

Closely adjoining is the Rath of Caelchu, and beyond it two other raths in juxtaposition, together with a small well, styled Tober Finn, or the Well of the Heroes. The summit of the hill is crowned by a mound styled the 'Rath of the Synod'; and upon it tradition avers that some of the Synods at Tara in Christian times were held. Further southward is the great oval enclosure,

or 'Fortress of the Kings,' the most extensive of all the earthen circles at Tara, measuring about 290 yards in length in its longest diameter. Immediately within its northern boundary is a small circular moat, styled 'The Mound of the Hostages.' Nearly in the centre of the enclosure is the *Forradh*, and towards the south-east 'Cormac's house'; between it and the *Forradh* is the supposed site of the ruins of *Teamur*, from which Tara takes its name.

The other objects of general interest are the *Rath of Laoghaire*, in which it was said the king was buried in a standing position, armed for battle, and with his face to his foes. A quarter of a mile from this locality there is a great fort, styled the *Rath of Queen Meave*. All these remains belong to a mound-building race. There is one trace of stone-work, a cashel situated not far from the 'Slope of the Chariots.' This, together with the rectangular style of the so-called banqueting-hall, points to a comparatively late period for their erection. There is no trace of any general system of defence. The remains on the Hill of Tara are, it would appear, a series of isolated fortified posts (fig. 35).

Very few researches have been made to elucidate the history of the age and civilization of the inhabitants of raths. Those made by R. J. Ussher are the most important, and throw most light on the subject. An interesting description of objects found in the kitchen-middens of raths may be seen in vol. vii., *Journal R.H.A.A.I.*

The rath near Whitechurch, county Waterford, consisted of a ring fence; in the centre was a depression, flanked on one side by a rock, which, as the result of the exploration, proved hollow beneath. This hollow contained the kitchen-midden of the rath, and when

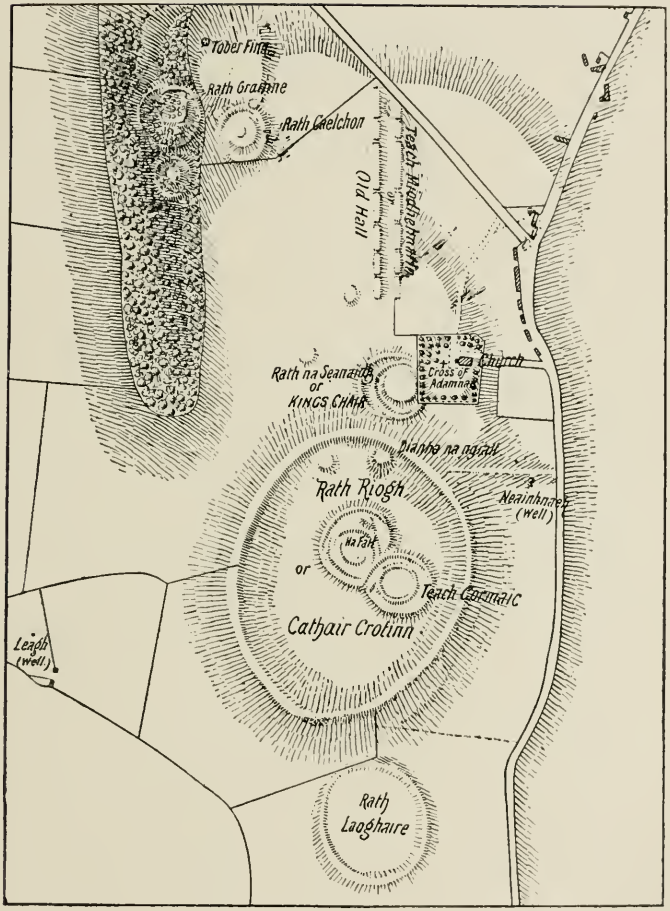

FIG. 35.

General plan of the earthen remains on the Hill of Tara.

excavated to the depth of about 30 feet was ascertained to have filled a cave of considerable size, descending at an angle of about 50°. This cavity was choked with earth and stones, containing charcoal, bones, and other relics. The animals represented were a small breed of oxen, pigs, goats, dogs (the canine bones were of large size), cats, and domesticated fowl. The rath had evidently been occupied from remote times to well on in the Iron Age, for iron objects were numerous, as also slabs of stone, arranged evidently for hearths at various levels in the cavity, which doubtless became buried under the constantly accumulating *débris*.

A large portion of the kitchen-midden is believed to have remained undisturbed. At a considerable depth the cavity extended, and was found free of earth. On exploring it, by means of lights, large chambers were discovered, from one of which, by a steep descent, was a way into an extensive system of galleries. On the floors of these galleries were found charcoal and broken bones of domestic animals, similar to those in the upper kitchen-midden. Mr. Ussher explored several other raths, none of which, however, presented equal facilities for exploration, or such a yield of antiquities.

In Dumbell Rath, county Kilkenny, many articles of bone, bronze, and iron were discovered, and among the former were some decorated combs. The bronze objects included pins, one of them most delicately engraved, and a highly interesting but very small bell. In the large collection of antiquities found at Dowris in 1830 were thirty-one bells of various sizes, having loose clappers, and many of them slits also, to allow the sound to escape more freely. It is suggested that these were bells for cattle, and such would be specially useful among the dense forests which then

overspread the island. They are, it is believed, of a very late, if not altogether modern, period.

A rath near Ardfinnan, county Tipperary, described by the late Rev. James Graves, may be taken as a typical example as regards its souterrains. In the interior of many earthen forts and stone cashels there are often chambers and subterraneous passages, which vary in length as well as in breadth and height. These passages are built of uncemented stones, and are covered with flagstones, the extremities of which rest on the parallel walls; and whilst some are too low to stand erect in, and the explorer has to proceed on hands and knees, others are upwards of six feet in height, and of corresponding breadth. They were constructed not only for habitation but also for defensive purposes, and follow strictly the principle used by the builders in the defence of entrances to cashels, of which those in Inismurray are good examples. The entrances to these retreats appear to have been concealed with great care. Their discovery is generally the result of accident.

In the Rath at Ardfinnan, the souterrain lay a little from the centre of the enclosure, and was approached by a regular flight of steps, giving entrance to a small beehive-shaped chamber of an irregular circular form. It is about 7 feet wide, by $5\frac{1}{2}$ feet high, built of rough blocks of limestone. From this chamber a narrow passage, through which the explorers had to creep on all-fours, led into another chamber of the same character as the foregoing, and from this, a similar passage gave entrance to a third beehive-shaped cell of larger size than the preceding. The passages were square-headed and roofed with slabs stretching across from wall to wall. The jointing of the stonework was very irregular, no courses being perceptible, and the stones

were rudely fitted to each other. In each chamber the beehive-shaped vault was capped by a single stone at top. What is very noteworthy, as bearing on the habitable nature of these souterrains, each chamber was provided with two ventilating shafts, placed near the top, and diverging in opposite directions towards the surface. That these structures were intended for the storage of valuables, and for occasional places of refuge for the inhabitants of the rath, there can be little doubt. They would be unsuited for ordinary dwellings; but for that purpose they were not needed. Wattled, mud, or

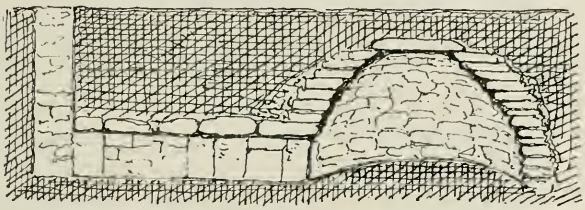

Fig. 36.—Section of an ordinary underground beehive-shaped hut.

stone-built houses served for the ordinary habitations of the chieftains and their followers, and it can be easily imagined how the entrance to these cellars might be concealed, so as to escape the attention of plunderers. That they were often discovered and rifled there is abundant evidence. 'In the Brehon Law, the law of distress contemplated the event of the distress being carried for concealment into a "cave," and provided accordingly.' In fact, these 'caves' were but the clochán or stone huts, so common in the west of Ireland, placed for concealment under the ground.

Fig. 37 represents the souterrain of Ardtole, county Down, close to the old church of the same name. The

view is taken near the centre of the passage, looking east. Sheets of white paper were used to reflect the sunlight through an opening in the roof, caused by a covering stone having fallen in. The total length of the passage is 118 feet. The chamber is 17 feet in length, 6 feet 6 inches wide, and the average height 5 feet 3 inches. The passage presents the usual obstruction to a hostile intruder in the form of a perpendicular rise of earth and stones. The photograph and description have been supplied by Mr. Welch.

Sometimes these underground chambers were roofed with flags or slabs projecting one over the other, and so arranged as to form a rude arch. George H. Kinahan, M.R.I.A., remarks, however, that a few were burrowed out in the drift, and had clay sides and roofs. One of this class in the barony of Bear, county Cork, had three chambers, while some had as many as eight or ten. Tacitus, in his *Germania* (xvi.), states that, besides their ordinary habitations, the Germans possessed a number of subterranean caves dug out and carefully covered over with soil. In these they found shelter from the rigour of the seasons, and in times of foreign invasion their effects were safely concealed. Numerous allusions to forays by bands of Northmen occur in the Irish Annals of a later period. In the year 866 the provinces of Leinster and Munster were plundered by the Danes, 'and they left not a cave there underground that they did not explore . . . neither were there in concealment underground in Erinn . . . anything that was not discovered by these foreign wonderful Denmarkians.'

From an Icelandic legend, quoted by Walker in his *Rise and Progress of Architecture in Ireland*, it appears that these retreats were used in the ninth century. The passage is as follows:—'Leifr went on piracy towards

FIG. 37.

Souterrain of Ardtole, County Down. From Welch's Irish Views.

the west, and infested Ireland with his arms, and there discovered large subterraneous caves, the entrances of which were dark and dismal, but, on entering, they saw the glittering of swords which the men held in their hands. These men they slew, but brought the swords with much riches away.'

While a railway was in course of formation, a most extensive souterrain was discovered in a cutting near Athlumney, county Meath. It consisted of a straight passage, 54 feet long, 8 broad, and 6 high, branching into two smaller passages, which run off at right angles from it, and ending in two circular beehive-shaped chambers, together forming the figure of a cross. 'The walls of this great cave having risen to a height of about 4½ feet, they then begin to incline, and the roof is formed of enormous flagstones, laid across. These stones are all rough and undressed, and they are placed together without mortar or cement.'* Only a few bones of oxen were discovered.

T. Crofton Croker gave a long and detailed account of numerous souterrains in the county Cork,† examined by him in the year 1835. Some had evidently been inhabited, for a considerable quantity of charcoal and fragments of a quern or hand-mill were found. He states also that his companion, Mr. Newenham, had 'been exploring underground chambers by the dozen.' In the course of an hour he visited five sets within a circuit of two miles. Some examples appear to have been ventilated by small square apertures. They did not rise perpendicularly, but sloped upwards at an angle of about seventy degrees. None of these latter were connected with ancient forts or entrenchments.

* *Beauties of the Boyne and Blackwater*, p. 135.

† *Dublin Penny Journal*, vol. iii., pp. 350–52.

The Rath of Parkmore, which contains a magnificent specimen of a souterrain, was defended by two concentric ramparts and fosses, the diameter of the entire being 214 feet. The ramparts were formed of high mounds of clay, faced with stone, and having deep ditches. The opening to the souterrain is about the centre of the enclosure (fig. 38). The first gallery runs in a south-westerly direction from the entrance. It is 26 feet long, 6 feet high, and the same number of feet in breadth. The side walls are formed of large stones, rudely put

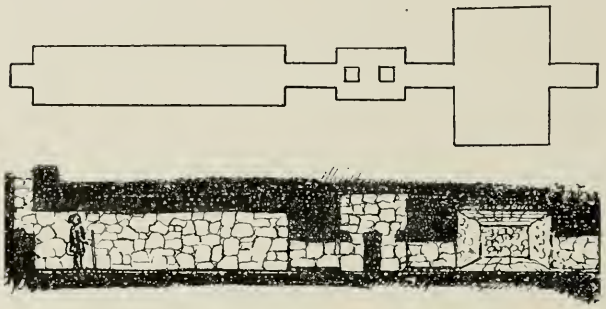

Fig. 38.—Ground-plan and section of Souterrain in the Rath of Parkmore.

together, and the roof is made of immense flagstones. At the end of the first gallery is a passage about 5 feet in length, but only $3\frac{1}{2}$ feet high, by 2 feet wide. In order to pass through this confined communication one must crawl on hands and knees. When the end of the passage is reached it is found to be terminated by a wall built across its breadth. The only way by which to advance farther is by ascending through a square hole overhead, the breadth only 1 foot 9 inches. On emerging through the opening one finds himself in a little chamber 7 feet long, by $5\frac{1}{2}$ feet broad, and 4 feet high.

If desirous to proceed further, one must descend through another square opening, which is similar to that already passed, and creep from thence, as before, through another low and narrow passage, also 5 feet long by $3\frac{1}{2}$ feet high, and 2 feet wide. This last-mentioned passage leads into another gallery, which runs at right angles to the gallery above described. It is 14 feet long by $9\frac{1}{2}$ feet wide, and 6 feet high. Opposite to this another passage leads, as a kind of sally-port, to the exterior of the inner rampart of the fort. The last-mentioned passage is 5 feet long, by 2 feet wide and $4\frac{1}{2}$ feet high. The flagstone which was placed outside against this aperture was 4 feet square. Thus, from whatever end of the souterrain its inhabitants might be pursued, a fatal resistance could be made. Flagstones stopped the holes (which have been described) in the passages, and their upper surfaces. being even with the floor of the little appartment, ' a stranger would have much delay and difficulty in discovering the apertures they covered. In this little citadel a woman or a child could arrest the progress of giants ; for the instant one of their heads appeared at the opening, a blow of an axe or of any heavy implement from above would prove fatal to him who was leading the forlorn hope, and his lifeless body would effectually block up the passage against those who followed. If the fort happened to be stormed, its occupants had a secret exit into the inner fosse by means of these caves, and, in case of friends happening to be pursued, and obliged to seek protection from the garrison, these intricate underground passages afforded safe ingress for friends, but were impracticable to the enemy.'

The souterrain in the fort on the lands of Murty-clogh, closely adjoining the Rath of Parkmore, is even

more spacious, but does not afford such a good specimen of primitive defence.

An interesting account is given of the exploration of a remarkable series of subterranean chambers underneath a fort on the townland of Doon, King's County, situated on the summit of a hill rising about 200 feet above the level of the surrounding country. These chambers were cleared out and appear to have been of great size, one of them being nearly 34 feet long and 7 feet broad by 6 feet in height—the roof formed of enormous stones, some of them 9 feet in length, and from 5 to 6 feet in breadth. The general architectural arrangements between this series of chambers and passages and the ancient entrances to the cashel of Inismurray are almost identical. The labour expended in their construction must have been very great, one stone in particular, forming the extreme eastern end of one of the chambers, being 10 feet long, 7 feet wide, and 2 feet thick. Near Dysart, not far from Mullingar, in consequence of the rath under which they lay having been cut away, a complete subterranean village, consisting of upwards of ten beehive-shaped chambers, with connecting galleries, became exposed to view.*

Souterrains almost similar in construction to those found under raths are often discovered in the most unlikely places, the means employed for concealment of the entrance to the one class being employed in the other, and probably the dwelling was erected over them.

* A very good description of a souterrain is given by Mr. T. Broderick (*Journal R.H.A.A.I.*, vol. v., 4th ser., pp. 637, 638). It is in the centre of a large circular fort, which covers an area of more than two acres, situated in the townland of Greenville, midway between Mount Bellew and Castle Blakeny. The fort is surrounded by two high ramparts of earth, with a deep ditch between; the remains of the third rampart are now nearly level with the field.

One that was explored, in the county Clare, consisted of three chambers of considerable size, two of them being about 26 feet long by 7 feet wide and 6 feet high. In the innermost chamber a large flagstone was found resting on four upright stones that formed a kind of table; under this there were some bones.

Molyneux, in the year 1684, described a somewhat similar object near a place he styles Warrington, county Down :—'In the middle of the vault were fixed, in the ground, four long stones, each about 2½ feet high, standing upright as so many legs to support a flat quarry-stone placed upon them. This rude stone table seemed designed, by the heathen founder, as an altar to offer sacrifice upon for the deceased. Under the table, on the ground, was placed a handsome earthen urn; it contained broken pieces of burnt bones.'

Both these souterrains may possibly have been built originally for habitations, as it is not likely that their architects would have erected such large vaults for deposition of the calcined ashes of only one individual. After the cave was abandoned as a habitation, it may have been utilized as a sepulchre, or though still inhabited, the innermost compartment may have been devoted to the relics of the dead.

In the townland of Mullagheep, county Donegal, there are small souterrains; when first entered, in the year 1854, in them were found traces of charcoal, together with the fractured bones of an Irish elk, seemingly broken for extraction of the marrow. These bones were sent to the Royal Irish Academy, and were afterwards presented by the Council to the Royal Dublin Society, and are now, it is believed, deposited in the Museum of the Science and Art Department, Kildare-street.

The description of an artificial cave examined in the townland of Bellurgan, parish of Ballymascanlan, county Louth, may conclude the notices of these souterrains.

One of the flagstones covering the cave, having been stripped bare of mould, was lifted, when a passage was found, about 4 feet high and 3 feet wide, inclining downwards in a direction parallel to the slope of the bank over the adjoining river. As the defensive arrangements are of a typical character, more complicated than, but resembling the most ancient entrances to, cashels, they are given in Mr. Edward Tipping's words:—'After 23 feet, it (the passage) turns at right angles to the left or towards the river, and continuing 13 feet 6 inches further, terminates apparently built up square; but in the floor was seen a square hole, descending which, we found at a level about 3 feet lower a continuation 19 feet long, and in the same direction, which finally terminated in a circular space or chamber, both wider and higher than the passage leading to it.' The cave is constructed throughout of water-worn boulders, evidently taken from the bed of the adjacent river. In most of these deserted galleries and chambers—badgers, rabbits, and rats now hold their revels.

In a primitive state of society, it seems to have been a very general belief that it was needful to appease the anger of the spirit of the earth for intrusion into its domain by digging into the ground for the foundations of buildings. To this spirit, human blood was considered to be the highest offering that it was possible to make. In India and many Eastern States the belief still exists—as well as in Siam, Borneo, Japan, New Zealand, and Fiji. It prevailed over the European Continent and the British Isles. In Scotland the Picts

are reputed to have poured human blood on the foundations of their edifices, and the ancient Irish also seem to have believed in the efficacy of this practice. Attention may be drawn to the well-known legend which relates how St. Columbkille defeated the machinations of an evil spirit, which sought to impede his building operations on the Island of Iona, by the voluntary sacrifice of one of his companions.* This story contains very plain evidence indeed of the fact that in early Christian times human sacrifices were still remembered, if not indeed practised.

At a later period a quern-stone was usually placed under the foundation of any structure being erected.† The sacrifice of a fowl seems to be the last trace of this barbaric custom. A tradition connected with many old Irish castles is that blood had been mixed with the mortar, which imparted the hardness and tenacity so characteristic of ancient cement.

The water-spirit also required his tribute, and hence

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* After Columbkille was banished from Ireland, his first attempts to build on Iona were rendered vain by the operation of some evil spirit; the walls fell down as fast as erected, and it was revealed to the saint that they could never stand until a human victim was buried alive beneath the foundations. One account says the lot fell on a companion of the saint, named Oran, as the victim required for the success of the undertaking; another states that Oran voluntarily devoted himself, and was accordingly interred alive. At the end of three days Columbkille, wishing to take a farewell-look at his old friend, ordered the removal of the earth. Oran thereupon raised his swimming eyes, and addressing Columbkille, said: 'There is no wonder in death, *and hell is not as it is reported.*' The saint, shocked at this disclosure, instantly ordered the earth to be flung in again on Oran, uttering in Irish the words: 'Earth! earth! on the mouth of Oran, *that he may blab no more.*' This saying has passed into a proverb. There is also the well-known legend, which relates that Vortigern, advised by the British Druids, sought out a victim to sacrifice at the foundation of his castle.

† *Ulster Journal of Archæology*, vol. i., p. 146.

is supposed to have arisen the widespread reluctance amongst primitive sea-side folk to rescue a drowning man from the water; the old superstition that—

> 'Save a stranger from the sea,
> And he 'll turn your enemy.'

might, many years ago, have been considered universally prevalent along the Irish littoral. When in the Solomon Islands a man accidentally falls into the river, and a shark attacks him, he is not allowed to escape. If he succeeds in eluding the shark, his fellow-tribesmen will throw him back to his doom, believing him to be marked out for sacrifice to the god of the river.

In Egypt this idea is evidently present in the mind of some of the Arabs on the Nile. Before trusting their boat to the mercy of the cataract when descending the river, a stick is thrown into the current; if this disappears in the swirl of the waters, it is looked upon as a favourable omen, or that the offering has been accepted.

The water-demon in modern times assumes, in different localities of Ireland, various forms and attributes, according to the ideas of the peasantry in regard to its nature. The crops on Coolnahinch Hill, in the county Meath, were, in olden times, always eaten by the *ullfish*, which issued from the adjoining lake. This fabulous monster, according to the old *shannachies*, or story-tellers of the neighbourhood, is an aquatic horse which lives at the bottom of Moynagh lake and other sheets of water in the county Meath. The attention of P. W. Joyce was drawn to the name of this strange monster, and he states that *ullfish* is a corruption of *ollphiast*—pronounced *ulfeest*—which has the same general meaning as *piast*. Oll, or ull, is a prefix, signifying very large, so that *ollphiast* is a very large *piast* or serpent-demon.

In the vicinity of a cashel on Slieve Mis, county Kerry, are two dark forbidding-looking tarns lying in a hollow of the mountain. One is regarded by the peasantry as unfathomable. The lakelet derives interest from a legend in the *Leabhar na h-Uidhre*, relating that it was once infested by an enormous *piast*, which devoured both the inhabitants of the fortress and their cattle. On one occasion, when the hero Cuchullin was near the cashel, he heard, at midnight, the approach of the monster. 'These be no friends of mine,' said he, 'that come here'; and he fled before it, and jumped over the cashel wall, and alighted in the centre of the enclosure and at the door of the king's residence—a record leap. *

The oldest written reference, at present known, to belief in supernatural aquatic horses was discovered by O'Donovan in a vellum manuscript in Trinity College, Dublin. It is a very extraordinary passage. Readers interested in the subject are referred to a literal translation of it as given by the discoverer in the first volume of the *Transactions, Kilkenny Archæological Society*, p. 367.

The legend regarding this mythical demon assumes various forms in individual cases, and many are the tales the people can relate of fearful encounters with a monster covered with long hair and a mane. Legends of aquatic monsters are very ancient; almost all sheets of water possess their local demon, and in later times they assumed different forms. O'Flaherty has a very circumstantial story of an 'Irish crocodile' that lived at the bottom of Lough Mask. The commonest legend, attached now-a-days to almost all lakes, is that they are the home of a frightful serpent, and that no one will

* *Ulster Journal of Archæology*, vol. viii., p. 126.

swim in the water for fear of being swallowed by it. The stories of immense deposits of treasures buried deep in the bosom of lakes, and jealously guarded by aquatic monsters, may have arisen from the actual deposition of treasure, or what was then regarded as treasure, in lakes or fountains, as an offering to, or part of an ancient cult of, water.

Ireland anciently possessed a population living in artificial structures erected in the lakes (fig. 39). On the Continent of Europe these dwellings were usually placed on piles, whilst in Ireland they were built on artificial islands. A race inferior in numbers, in arms, or in physicial development, would avail themselves of artificial or natural bulwarks to ward off the attacks of enemies, and water has, from the earliest times, formed an important factor in the art of defence. In Europe its lake-dwelling population, as such, had ceased to exist before authentic history commences, whilst in Ireland, although many of these artificial islands may be of the remotest antiquity, yet owing to the unsettled and restless state of the kingdom, they continued to be used as places of refuge and defence up to the close of the seventeenth century; the most careful examination is, therefore, essential before arriving at a decision respecting the probable period of the primary construction of lake dwellings or 'crannogs'—as they are designated by the Irish-speaking population—the word being derived from *crann*, a tree, or timber. The number of lacustrine sites known in Ireland is now 230: these are, however, in all probability, a mere fraction of the multitude that had formerly existed. Those interested in the lacustrine population of ancient Erin are referred to a work styled *The Lake-Dwellings of Ireland*, which contains all at present known

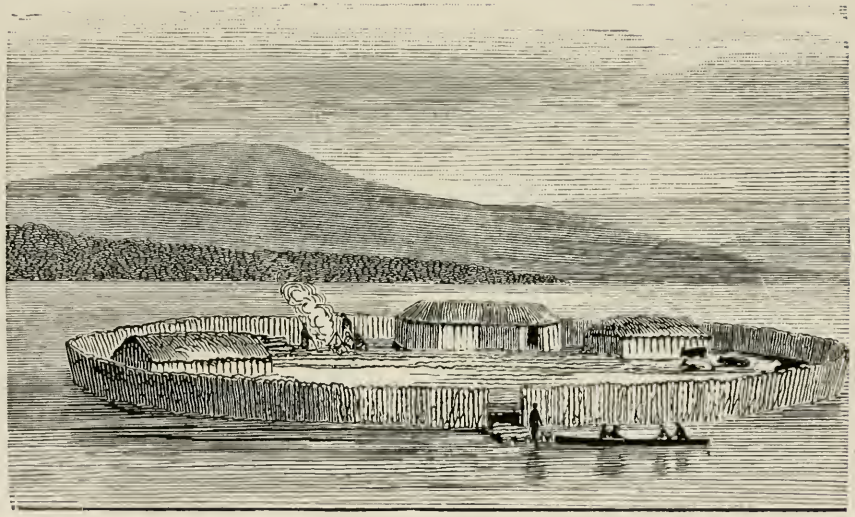


FIG. 39.

Irish Lake Dwelling of the isolated type. (Ideally restored from inspection of numerous sites.)

on the subject, and from which the greater part of the following information with regard to crannogs is extracted.

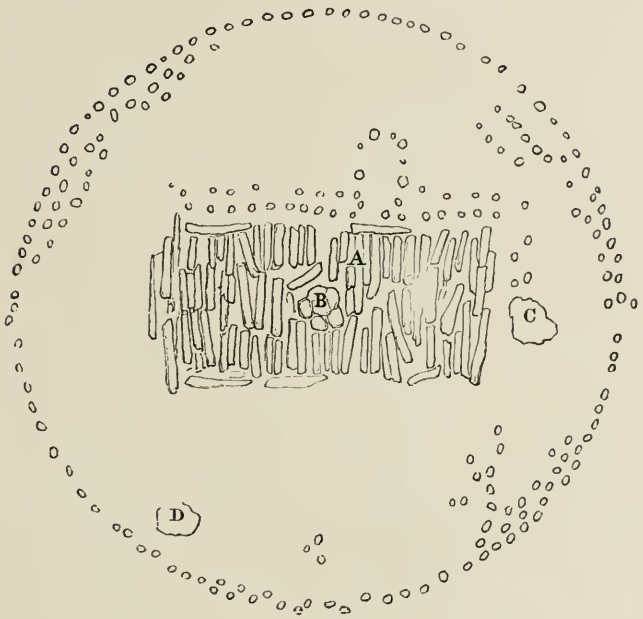


Fig. 40.—Plan of Crannog in Drumaleague Lake, County Leitrim.
(Scale 20 feet to one inch.)
A, Probable floor of hut. B, Hearth. C, Heap of hard clay.
D, Root of large tree bevelled off.

Having decided on the position, the crannog-builder set to work by driving stakes into the bottom of the lake, in a circle of from 60 to 80 feet in diameter, a considerable length of the stake sometimes projecting

above the water; these were, in many instances, joined together by horizontal beams, the interior being filled up by branches of trees, stones, gravel, earth, and branches (fig. 40). Often an inner row (or more than one) of piling is found about 5 feet distant from the outer one (fig. 41), and at various parts of the interior, piles are driven in either to consolidate the mass, or to act as stays for the walls of the dwelling. Next were placed one or two layers of round logs, cut into lengths of about 6 feet, and which were generally mortised into upright piles, kept in position by layers of stones, clay, and gravel. In some cases, when the foundation was soft, the superincumbent layers of timber were of great depth; in other cases, when the bottom of the lake was firm, the platform of timber was confined to a portion of the island. The side most affected by the action of the water was frequently strengthened by rows of piles, sometimes five or six deep, as well as by a breakwater of stones (see fig. 42). On the foundation—when raised sufficiently above the water—the dwelling, or dwellings, were erected, the hearth being generally in the centre of the island, for in almost every case a collection of flag-stones has been discovered in the interior of the enclosure bearing on them marks of fire—and, in some instances, several hearths occur. Considerable ingenuity was displayed in the formation of these island-homes, which were frequently constructed in a depth of from 12 to 14 feet of water. Apart from having served in their day as secure retreats for large numbers of persons, these dwellings have proved their durability by resisting successfully the ravages of time.

Marshes, small loughs surrounded by woods, and large sheets of water were alike suitable for the home of the Irish lake-dweller, his great and primary need

being protection. He was bound by no conventional engineering rule ; he did not exclusively employ wood, but appears to have been guided by surrounding cir-

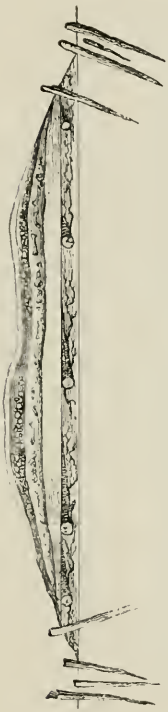


Fig. 41.—Section of Crannog in the bed of the drained Lake of Cloncygonnell, Co. Cavan.

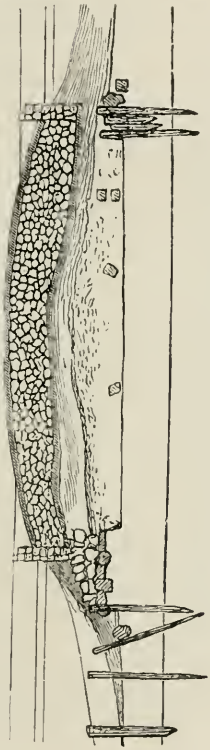


Fig. 42.—Section of one of the Ardakillen Crannogs, Co. Roscommon.

cumstances. On peaty or muddy sites a wooden substructure was essential ; on hard bottoms stone, gravel, or earth were, if convenient, employed. As providing good fishing-grounds, the entrance or exit of stream

from lake was a favourite site, and natural shoals thus placed were eagerly selected—

> 'There driving many an oaken stake
> Into the shallow, skilful hands
> A steadfast island-dwelling make,
> Seen from the hill-tops like a fleet
> Of wattled houses.'

In some Irish manuscripts lake-dwellings are called crannogs. G. H. Kinahan is of opinion that, although 'crannog' is now the generally accepted appellation for the ancient lake-dwellings of Ireland, it is, nevertheless, 'a modern term introduced to supply the place of the ancient one, which is unknown or unrecognised.'

In the Irish Annals they are in general simply designated *Inish*, i. e. 'the island.'

There are numerous localities throughout Ireland in which the term 'crannog' is embodied in the name, and where, consequently, must have been formerly a lake or swamp, with its accompanying artificial island, although, in some cases, the lake has now disappeared, and the swamp has been drained. In most of the districts in which these islands were found, several small lakes are clustered together. In Connaught, near the demesne of Longford, county Sligo, the residence of Sir Malby Crofton, in a small pond, almost dry in summer, there is an islet, still called by the country people 'crannog.' It has bequeathed its name to the townland in which it is situated, *i.e.* Lochanacrannog, signifying 'the little lake of the crannog' (fig. 43).

Crannog sites in small marsh-lakes are very remarkable, for if the question be asked why these dwellings were erected in such diminutive sheets of water, it is difficult to give a conclusive and satisfactory answer,

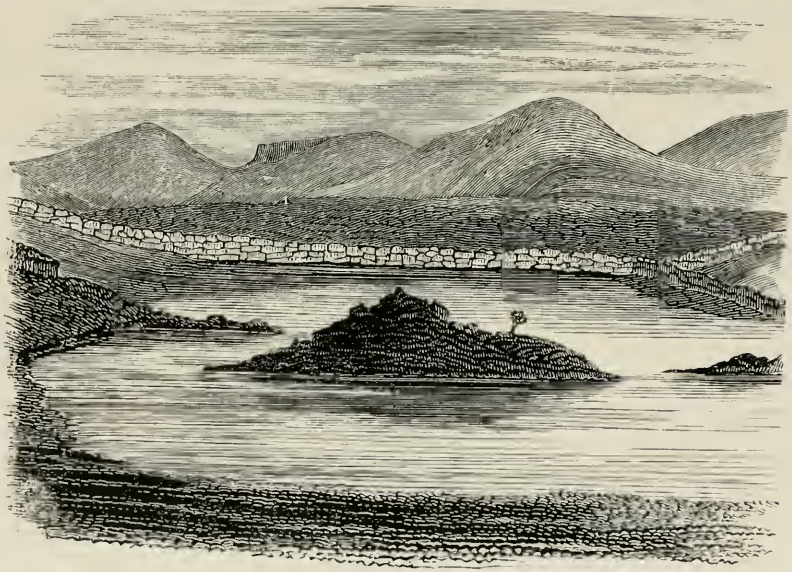


FIG. 43.

General view of the Crannog, and half-drained Lake of Lochanacrannog, County Sligo.

either as regards facilities for the subsistence, or the greater security of their occupiers. These lakes were shallow, with foul bottoms, on which the peat was, in some instances, already accumulating; therefore the fish were comparatively small, and few in number. The sites selected were usually close to the shore, therefore the distance could be easily bridged over by an enemy; the water not being deep, and its surface sheltered from the wind, it was probably frozen over

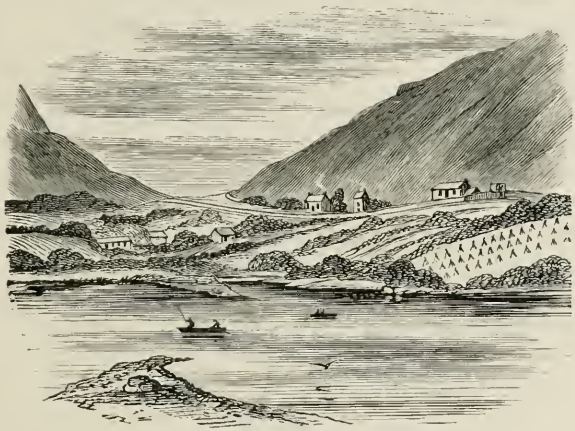


Fig. 44 —View of upper portion of Lough Talt, Crannog site in foreground.

for more or less lengthened periods every winter—an opportunity facilitating pillage eagerly to be embraced by an enemy. Crannogs thus situated would, however, give comparative security from a sudden surprise during the non-winter period, and would be, perhaps, as secure as a fort, or dun, even during a severe frost.

Some crannogs were built in tarns and lakes, at great elevations in mountains, amidst towering cliffs, and

primeval forests. In Lough Talt, county Sligo, are the foundations of three lake dwellings, one of them still well defined. The sites can all be explored, owing to the former water-level having been lowered about sixty years ago. On the site, which is still entirely surrounded by water (fig. 44), were discovered a beam bearing traces of mortise holes—probably a part of the original wooden structure—a good specimen of a bone arrow-head, fragments of polished and worked bone, also teeth and bones of oxen, sheep, and horses.

The sites of many crannogs, at present covered by water, are often designated 'drowned islands.' *Bawtha*, signifying 'drowned,' is applied by the country people to places or objects submerged in water. When the annalists recount how the sacred books of the Christian Irish were destroyed by the Danes, who threw them into the water, they use the expression the 'books were drowned'; thus showing, remarks P. W. Joyce, that this application of the term is not modern.

Although antiquarians differ in opinion respecting the age of crannog remains, yet, after patient analysis of the characteristic features of the numerous excavations made in recent years, the weight of evidence seems to indicate that these constructions were of all ages, some being very ancient; it is apparent that they have been built and rebuilt, and in them have been found implements of stone, bronze, and iron.

The outer range of piles around crannogs rose considerably above the water, and formed a stockade or breastwork for repelling an attack from enemies (fig 39). Within the area thus enclosed stood the hut or huts in which the families lived; the stockade served equally for shelter and defence, fulfilling the same purpose as did the circumvallation of the rath on *terra firma*.

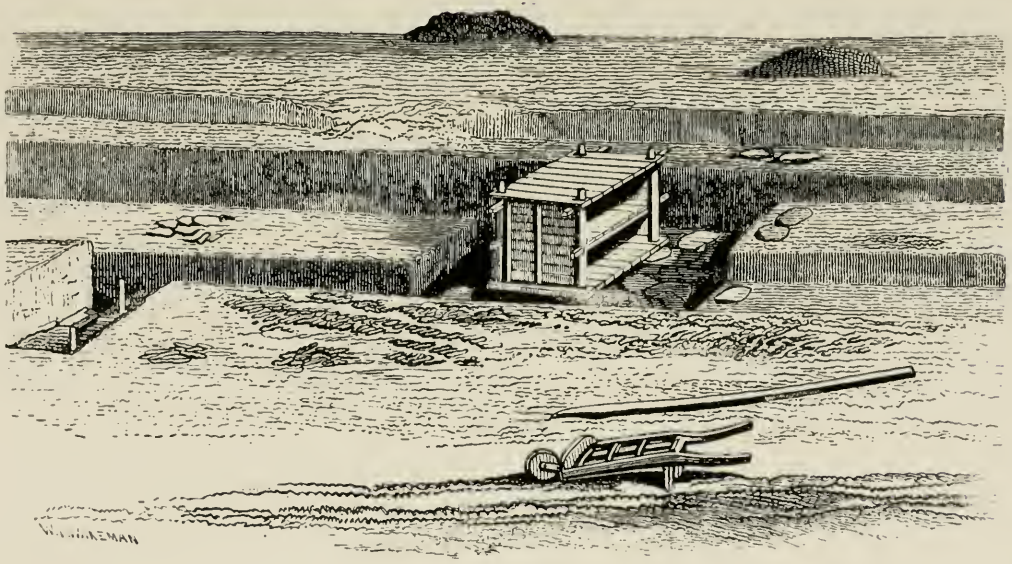


FIG. 45.

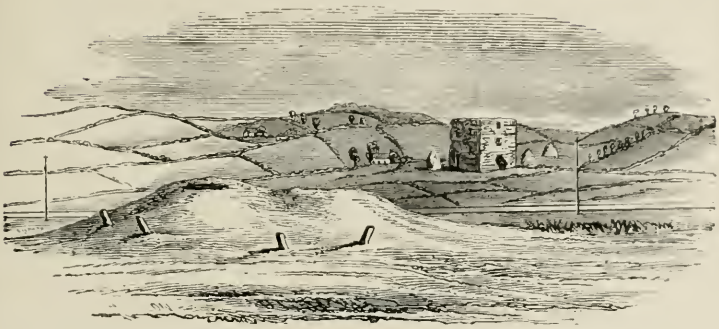
Crannog Hut discovered at Inver, County Donegal. (Drawn from the Model in the Museum, R.I.A.)

Edifices constructed of logs, of wattling and hurdles, daubed over with clay and thatched with reeds were, in early times, considered characteristic of the Irish. We need not, however, refer to history, or depend upon conjecture, in order to reconstruct these island dwellings; for the foundations, and even some of the log walls, have been exposed to view. Good examples occurred in at least six crannog-sites, whilst at Kilnamaddo, in county Fermanagh, log huts were found buried under 17 feet of peat, practically almost perfect, wanting nothing save the roof; they were very low, the side walls scarcely 4 feet in height, and they might be looked upon rather as lairs for sleeping in, than dwellings in the modern sense of the word; indeed, the primitive races of Ireland, whether building in stone or wood, made use of low roofs, and consequently low doors: the openings left for egress and ingress were probably closed by hurdles of wickerwork.

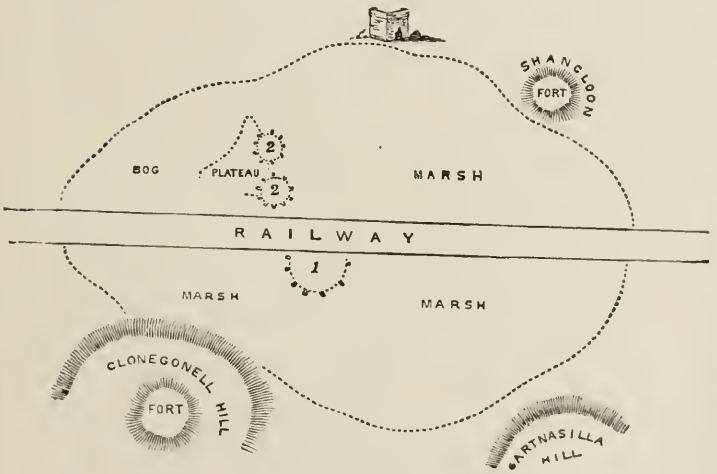
The wooden hut discovered in 1833 by Captain W. Mudge, R.N., in the bog of Drumkelin, parish of Inver, county Donegal, is the most perfectly preserved primitive dwelling of that material yet brought to light in Ireland (fig. 45). It was surrounded by a staked enclosure; portions of the gates were also discovered. The flooring of the house rested on hazel branches covered with a layer of fine sand; a paved causeway, over a foundation of hazel branches and logs, led from the door of the house to a fire-place, on and around which lay ashes, charred wood, and half-consumed turf. This unique structure was nearly square, 12 feet wide and 9 feet high, formed of rough logs and planks of oak, apparently split by wedges, the interstices filled with a compound of grease and fine sea-sand. One side of the

hut, supposed to be the front, was entirely open. The framework consisted of upright posts and horizontal sleepers, mortised at the angles; the mortises were very rough, as if made with a blunt instrument—the wood being bruised rather than cut. The interior of the structure was divided into two stories, each about 4 feet in height; its flat roof was 16 feet below the surface of the bog. Allowing 9 feet for the height of the house, and 10 feet for the original depth of the surrounding lake, nearly 35 feet of bog must have grown around it since its first erection. The depth at which the hut was buried, and the flint, stone, and wooden implements in it, seem to prove unquestionably its extreme antiquity. There is a beautiful model of this unique structure deposited in the collection of the Royal Irish Academy.

In the year 1839, at Lagore, county Meath, the site of an historical lake-dwelling or crannog was discovered by labourers engaged in making a drain through the ancient bed of the lake. For some years after the drainage operations, the site remained undisturbed, but from 1846 to 1848 the site of the crannog was re-opened by men engaged in the process of turf cutting, and, as on the previous occasion, quantities of bones were exhumed; also a surprising number of antiquities, together with remains of the ancient stockading, and the ruins of several structures used as huts. The site consisted of a circular mound 520 feet in circumference, slightly raised above the surrounding bog or marshy ground which formed a basin of about a mile and a-half in circuit, bounded by elevated lands. The circumference of the circle was marked by upright posts of black oak, from 6 to 8 feet in height, mortised into beams of similar material, 16 feet below the surface, laid flat



(A). Example of a completely drained lake-bed; site of Crannog in the foreground.



(B). General Plan of the Bed of the Drained Lake.

FIG. 46.—CLONEYGONNELL (*alias* TONYMORE), CO. CAVAN.

upon the marl and sand beneath the bog. The upright posts were held together by connecting cross-beams; parts of a second upper tier of posts were also found resting on the lower ones. The space thus enclosed was divided into separate compartments by divisions that intersected one another in different directions; these divisions were also formed of oaken beams in a state of good preservation, and joined together with great accuracy. In some cases the sides of the posts were grooved and rabbeted to admit of large panels being driven down between them. It may be inferred that fire was the final agent of destruction, as almost everywhere amongst the timbers lay half-consumed logs and masses of charcoal. This lake-dwelling, founded originally in pre-historic times, was burned by the Danes who, for the purpose of capturing it, carried a vessel from Dublin overland, and launched it on the waters of the now dried-up lake. Structures formerly reared in the centre of sheets of water are now oftener found deep down below the surface on *terra firma*. This is occasioned by the rapid formation of peat, as well as by the discharge of water deepening and extending the outlet of streams, together with the contemporaneous deposition of matter held in solution in the lake-bed. From whatever cause it be, some sites of lake-dwellings are now on dry land (see fig. 46), while in many instances small ponds occupy sites which, from natural evidences, it is apparent must formerly have been extensive sheets of water (see fig. 47): and it will be of interest to give an example of such an ancient lacustrine settlement. In Moynagh Lake, near Nobber, county Meath, a network of bog and low-lying land environs this lake, and 'the island,' so-called by the country people. A good view of the site of the crannog

may be had from a hill near Nobber (fig. 48); the alluvial flat is the dried lake-bed; the 'island,' now covered with planting, has, since the draining operations on the River Dee, been converted into a narrow neck of land, running in from the more elevated ground of Brittas, between the two small sheets of water, which are now the sole remnants of the original lake of Moynagh. This neck of land seems to have been a natural shoal or bank of earth, utilized by the primitive crannog-folk for their lacustrine retreat. The portion of this peninsula occupied by the lake-dwelling is of oval form; after the fall of the water level—the result of drainage—a great part of the bank forming its southern face subsided, so that possibly the original shape may have been circular. On being dug over, its surface was found to be composed of small burnt stones, which had evidently been subjected to intense heat, as appeared to have been also the case in regard to the earth with which they were intermixed. At the south-east corner of 'the island' there is a remarkable deposit of ashes, 3 feet in depth, where it joins the site of the crannog, and which, though now about 6 feet above the surface of the lake, yet was under water previous to the drainage works. A colony of rabbits had taken possession of the heap of ashes; but by an examination of the material they had scraped out of the holes, and, by some little amount of digging, many objects of interest were found. Where this ash-heap, or midden, joins the crannog there is a layer of stiff clay similar to the sub-soil of the rest of the island. It completely covers the ashes; it is therefore open to conjecture that, at some comparatively recent period, the inhabitants, finding the site too narrow for their requirements, had increased its surface, possibly after the crannog had been burned, by

FIG. 47.

General view of the Crannog of Loughannaderriga, Achill Island, County Mayo. Example of a lake-bed almost filled by encroaching peat.

spreading a layer of earth over the old 'midden,' the ashes of which can be observed—thanks to the rabbit holes—to continue down into the island, lying in layers of different colours, white, brown, and red. Under these ashes there is peat. Amongst the superincumbent ashes there were numerous fragments of bone; where these were not calcined, they were quite decayed and in a state of pulp. Numerous articles were found, and may be seen in the collection of antiquities belonging to the Royal Irish Academy. This lake-dwelling offers a good example of one inhabited from ancient to comparatively modern times; for, although many stone implements, upwards of a score of fragments of flint-flakes—most of them fairly finished—pieces of worked bone, as well as some beads were discovered; yet among the superincumbent ashes there were numerous pieces of iron slag with portions of charcoal adhering to them, and from the great quantity observed, there would appear to have been on the island, at one period, a regular manufacture of iron implements. In the year 1850, when the level of the lake was first lowered, it is said that amidst a mass of bones of various animals some bronze hatchets were found. It is stated that the site of the crannog is within the demesne of Brittas; therefore a systematic and scientific excavation is now probably impossible. Careful examination, however, as far as practicable, has abundantly demonstrated the fact that the inhabitants of the crannog had used flint, bone, bronze, and iron; but whether in successive order or contemporaneously, must at present remain a matter for mere conjecture.

Although the low-lying ground surrounding this crannog site is now dry, and produces good vegetation for grazing purpose, about the year 1850—before the drainage operations on the River Dee were completed—these

lands were perfect swamps during the winter months, and would probably continue in that state if the clearing of the bed of the river were neglected. After exceptionally wet weather the lands are still liable to revert to their original condition; the autumnal rains of 1866 caused the low hill on which the village of Nobber stands to look like a green island in a miniature sea, and, judging from the steep sides of the clay hills around the hamlet, and from the accumulation of bog in the lowland, having a great depth of marl underneath, one is tempted to surmise that at some remote period, before the River Dee had cut out for itself a channel through the little glen situated about a mile from the village, all the low-lying ground was a vast lake with the hills rising like islands out of the water.*

The most extraordinary discovery with regard to Irish lake dwellings occurred at Ardmore, near Youghal. After a very high tide, the waters retired more than customary, disclosing the fact that this particular portion of the sea-shore had been the site of a forest, as remains of trees were observed in various parts of the submarine deposit. This submerged tract extends to between the four or five fathom line, but it has not been ascertained to what further distance it may stretch seaward. A bank of shingle having shifted by a change of current, laid bare the substructure of an undoubted crannog, which at high water was covered by the tide to a considerable depth (fig. 49). Either this dwelling had been erected when Ireland was joined to Great Britain, or it was existent when Ireland was at a greater elevation above

* Synopsis of a paper *On an Ancient Lacustrine Settlement in Moynagh Lake, near Nobber, Co. Meath*, read before the R.I.A., Nov. 12, 1888. The writer is indebted to Mr. Owen Smith, of Nobber, for much interesting information on this subject.

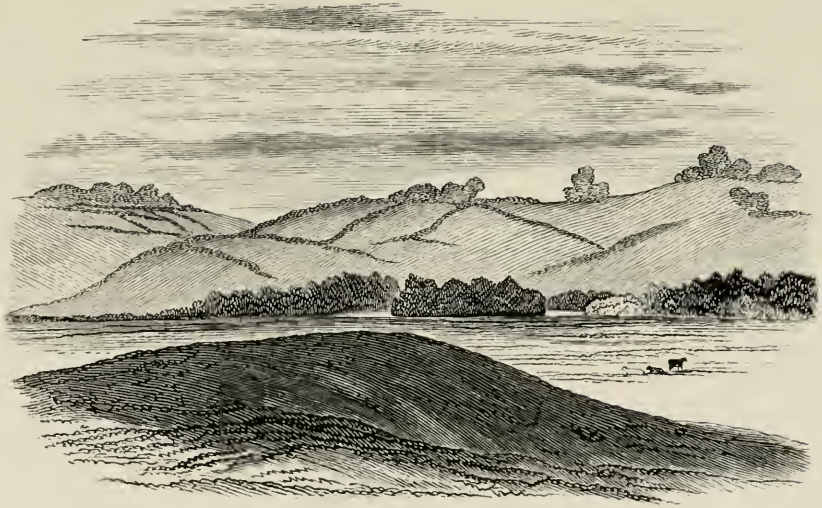


FIG. 48.

Partially-drained lake-bed of Moynagh, as seen from the hill near the Railway Station.

the sea, and therefore of a greater extent than at present; for the theory is enunciated by eminent geologists that many of our present harbours had been lakes in prehistoric times, and thus the bay of Ardmore, where the crannog site was discovered, may, long ages ago, have been a peaceful inland sheet of water. The Irish Annals contain much that was formerly looked upon as fabulous relations of inbreaks of the ocean, but which may be reasonably held to be the reflex of traditionary tales having some foundation in facts. There is also hardly a large sheet of water to which is not attached a tradition of a frightful outbreak of flood, covering what was formerly 'a town,' or which does not possess its legend of an enchanted well, which, consequent upon some affront offered to its guardian spirit, covered the valley, its inhabitants, and houses. May not these traditions be traceable to lingering remembrances of former lacustrine habitations?

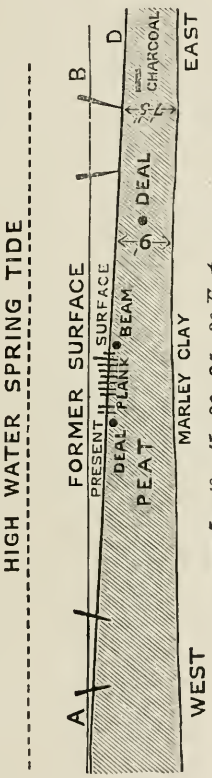


Fig. 49.—Section of submarine Crannog at Ardmore, Co. Waterford.

On Lough Gill, county Sligo, may be observed a good example of the gradual rise of water-level; the river

which conducts its overflow to the sea had wandered through a flat expanse of bog, which is now in greater part covered with water, wherein the roots and stumps of huge fir-trees are noticeable, as also in the low-lying ground near Tubbernalt. Here, in the centre of a small bay, may be seen, in summer, when the water is very low, a pile of stones which marks the site of a crannog; and the present level of the remains of the lake-dwelling, and that of the tree-stumps is about the same. The eastern side of the crannog which had been most exposed to the destructive action of the water, is composed of large stones, and it shelves downwards so as to form a breakwater; on the western or sheltered side, the edge sinks abruptly; here some traces of piling and layers of branches, on which the stones forming the crannog rest, were observable. In an exceptionally dry season—that of 1893—teeth of oxen, calcined bones, charcoal, nut-shells, an artificially worked stone, and a bone arrow-head were extracted from what appears to have been the refuse-heap of the habitation, at a depth of about 2 feet under the then very low water-level. Upon the rise of the lake-level, either through natural causes, or perhaps the formation of some weir, the crannog must have been abandoned, as it is now under the present summer level of Lough Gill; and the crannog in Annagh Bay was either built or the site was heightened, for the little islet is always above the highest winter floods of recent times. The permanent rise of Lough Gill caused the destruction of the low-lying pine forests. As a result of recent extensive drainage operations in the county Leitrim, a large additional amount of water has, through the river Bonnett, been directed into Lough Gill, at its eastern extremity. Lough Gill is one of the numerous

localities in Ireland to which is attached the legend of a buried city, and this points to the probability of the former presence of an ancient water-town being thus handed down in vague tradition.

The food on which the lake dweller existed appears to have been plenteous: fishing implements are found in abundance; he slew cattle—wild as well as domesticated—pigs and deer; and, in one refuse-heap, traces of megaceros were discovered. Immense quantities of carbonized vegetable remains were found on a crannog site in Meath. The barley was of the same small size as is found in Swiss lacustrine sites; grains of oats not larger than hayseed, hazel- and oak-nuts, sloes, and walnut-shells were found at Lough Nahinch, and cherry-stones at Ballinlough.

In the most diverse climates, settlements on the water seem to have sprung up independently, by virtue of the natural laws which govern man's action in a semi-civilized state. The continuance, in Ireland, of this primitive form of habitation was doubtless prolonged in consequence of the restless internecine feuds and generally unsettled state of the country.

In the opinion of some theorists, Irish lacustrine settlements seem characteristic of an early wave of immigration from the east; then throwing off its superabundant population, as does now the west; and in this manner, it is supposed, that the lakes of Central Europe and Great Britain became studded with water-laved houses. Recent investigation traces their origin back to a period so remote, that the evidences of man's formation and occupation of these retreats prove in their way as interesting as the remains of the buried cities of Herculaneum and Pompeii; for lacustrine dwellings, also, show traces of a species of civilization long passed

away, evidences of which were observable on the sites of Venice, Mexico, and London; and the purposes of their primitive founders were alike, whether their dwellings were situated on the lagoons of the Adriatic, the flats of Central America, or the reaches of the Thames.

The north of Ireland has, for many years past, yielded a rich harvest in the exploration of the sites of primitive huts, together with the refuse-heaps in their vicinity. W. J. Knowles seems to have been one of the most active and painstaking investigators of these settlements along the littoral. From the remains found, it is probable that their first occupiers were cannibals; for human and animal bones are strangely commingled. They appear to have been in an extremely rude state: no metal of any kind was found, there is scarcely a trace of polishing on their flint implements, the pottery used was coarse and sun-dried, and it is probable that they had daubed themselves with pigments.

In this the aborigines were not a whit more barbarous than the primitive inhabitants of Great Britain; for there can be little doubt of this red pigment having been in use for what was considered a personal decoration by the neolithic occupants of Britain. 'But this use of red paint dates back to a far earlier period, for pieces of hæmatite, with the surface scraped apparently by means of flint-flakes, have been found in the French and Belgian caves of the Reindeer Period, so that this red pigment appears to have been in all ages a favourite with savage man.' Lumps of colouring matter, of various hues, but principally red, have been found on the sites of Irish lake dwellings. This red pigment may, however, have been employed for the purpose of coating the exterior of earthenware crocks. 'The

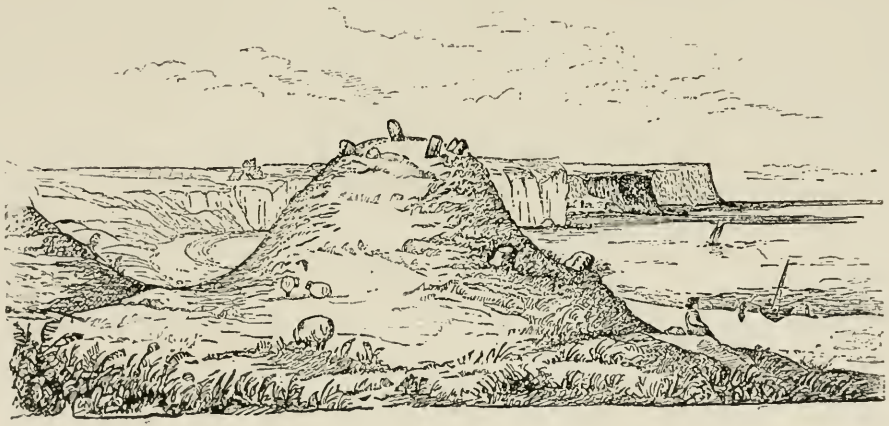


FIG. 49A.

Site of an ancient seaside settlement. Whitepark Bay looking west. Stone circle on mound in foreground.
From a sketch by William Gray, M.R.I.A.

practice of interring war-paint with the dead is still observed among the North American Indians'*:—

> 'The paints that warriors love to use
> Place here within his hand,
> That he may shine with ruddy hues,
> Amidst the Spirit Land.'

They do not seem to have possessed domesticated animals, nor do they appear to have been acquainted with agriculture. They, in fact, belonged to the Neolithic Age in Ireland, and to even its earliest period. There was, however, in one locality, evidence of a still older stone age. Along the shore, a short distance from some hut-sites, heavy and massive flint-flakes, covered with a thick crust, glazed on the outside, were noticed. This crust is observable only on flints exposed to atmospheric influences; for flints buried in the ground, deprived of air and moisture, do not weather. Several blocks of flint thus crusted, and which had been used by the hut-building folk, when carefully examined, afforded evidence that they had been previously wrought in long distant times. This is a good example of an older and a newer Stone Age: a people dwelling in huts along the northern littoral, found rude and large cores, flakes and implements, which would appear to have been of a different type, old, weathered, and deeply-crusted, when they picked them up, brought them to their dwellings, and re-wrought and finished them after their manner. A similar instance was noticed in some flint implements discovered in cists at Carrowmore, near Sligo.

A site examined and described by W. J. Knowles, at

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* *The Stone Implements, Weapons, and Ornaments of Great Britain*, p. 238, John Evans, F.R.S.I.A.

Ballyned, county Donegal, may be taken as a good illustration of these remains. The beach, where the various objects used by these primitive folk had been found, was, not many years ago, covered with sandhills, thirty feet in height. It has now been swept bare, through the action of the wind, and is, in places, studded with hut-sites. 'There were the usual hearths with black matter underneath, full of shells, and rounded and broken quartzite pebbles, some of which were cracked from having been in the fire, but others were not burned, and had evidently been split into sharp-edged pieces, by hammering. Those quartzite flakes and spalls must have been intentionally made and used for cutting and scraping, though there was no evidence of dressing, such as we found on flint implements. I picked up two flint pebbles, which were split or chipped, but I saw no flakes or implements of that material. Some hammer-stones were found.'

Articles of bronze and iron, glass and porcelain beads, and even coins, have been found in several of these sandhills; for instance, a coin of Queen Elizabeth at Dundrum, and a halfpenny of Queen Victoria at Portstewart. 'Such finds,' writes W. J. Knowles, 'have caused some of my archæological friends to look on flint implements as belonging to a comparatively late period, so late as to be at least contemporary with iron objects.' But as yet there has been no evidence 'that metal of any kind was used conjointly with the flint tools. The old surface is the test for contemporaneousness. Whatever is dug out of it must have been in use at the same time, and any implements lying loose on the surface, similar to those contained in the old surface, must be classed with them. But there have also been found, lying on the present surface, among the worked flints, grains of

shot, cartridge-cases, scraps of iron, such as nails, broken bottles, portions of old shoes, and stray coins of late date.'* It would not be surprising if modern articles had been trampled into the old surface where it is exposed, and thus become stumbling-blocks to some archæologists. Although some of these seaside settlements belong exclusively to a flint-using folk, many apparently lingered on to the time when bronze was in use, and possibly even to the period of introduction of iron.

The Neolithic Age in Ireland may in places reach back to the same period as in England; but, on the other hand, it may also in places be advanced to times comparatively modern.

The picture drawn by English and Spanish writers of the kind of life led by the vast bulk of the Irish in Elizabethan times, depicts a state of civilization which is not inconsistent with an extensive use, for the fabrication of weapons, of the readiest available materials. English writers may be charged with prejudice, but Captain Cuellar, a shipwrecked officer belonging to one of the galleons of the Armada, wrecked off the coast of Sligo, draws a very unfavourable picture of Irish 'manners and customs.'

The investigation of 'shell mounds' along the sea-coast, tells the story of primitive man as he lived. The Irish peasant of the present day delights in spending a few weeks of the summer at the sea-side; and his prehistoric ancestor seems to have been inspired by the same feeling. Of this, undoubted evidence has been left in the artificial hillocks which dot the northern and western littoral. Many of them that have been inspected

* *Proceedings Royal Irish Academy*, vol. i. (ser. iii.), pp. 184, 615.

lie only just above high-water mark, and are composed principally of the shells of crustacea and fractured bones, both of animals and fish; they may, in fact, be described as the remains of primitive man's summer picnic at the 'salt-water.' Scattered amongst them are spindle-whorls (so called), pins of bone, beads of bone, stone, and glass; weapons of bone and flint; hammer-stones abraded at the extremities, evidently used for breaking the fish-shells; fragments of coarse fictilia and masses of charcoal are intermingled in the *débris* of past festivities. In the townland of Keele West, situated in the island of Achill, were found three ancient shell-mounds, just above high-water mark and in close proximity to each other. These remains of the repasts of primitive toilers of the sea had been almost entirely removed by the peasantry, who burned the shells for the purpose of reducing them to lime for whitening their homesteads; this process had been going on for years, so that the original size of the refuse-heaps must have been very great. Two of them, however, had not been quite so much exploited as the first one noticed. Here were found a half-formed 'spindle-whorl,' a bead of green opaque glass, a hammer-stone and a bone of a red deer, which showed unmistakable marks of rude ornamentation. Nothing of metal was discovered; but there were traces of charcoal, bones of red deer and wild pig in great quantities, also shells of various marine crustaceæ.

George M. Atkinson describes a number of kitchen-middens discovered by him, in the year 1870, on the shore, as well as on some small islands, in the estuary forming Cork harbour. Two of the largest heaps were about 300 feet long, and from 3 to 5 feet in thickness. They consisted principally of oyster-shells, amongst which thin layers of charcoal were visible in many

places, whilst the sections exposed through denudation by the sea, or by farmers carting away the deposit for agricultural purposes, afforded evidence of different periods of occupation of these sites. With the exception of charcoal and some hammers of stone, no other evidence of artificial formation was noticed.

Popular tradition depicts some of these primitive fishermen as beings of gigantic stature. Great Man's Bay, in Iar Connaught, took its name from one of these giants. The country people show a large hollow rock, which they call his churn, and three other rocks supported the caldron wherein he boiled the whales which he caught with

> ' His angle-rod, made of a sturdy oak ;
> His line a cable, which in storms ne'er broke.'

In the bay of Galway is one of the most considerable fishing stations in Ireland. A village called 'the Claddagh' is situated not far from the town, and is reputed 'to have been occupied as a fishing station since the first peopling of the island. That it was so in the fifth century of Christianity appears from the life of St. Endeus, compiled from ancient authorities.'

In trying to picture to ourselves the life led by these dwellers on the sea-shore, we are helped by accounts descriptive of savages placed under similar circumstances in the present day.

Tribes of Chukches dwell in tents formed of skins on sand-dunes near the coast. These dunes are bestrewn with their broken implements and refuse of the chase. Although from trading with civilized nations the more important weapons of the natives are now made of metal, yet they still employ stone and bone implements. A shipwrecked sailor, who lived some time amongst the

Fuegians, describes the men as expert at making flint arrow- and spear-heads. The women really do all the work, as the men, except when hunting, lie about the huts. If a dead seal were cast ashore, they gorged themselves on the raw, and sometimes putrid, flesh and blubber. When they killed an animal in hunting, they fell upon it, cut it in pieces, and eat it raw. Sometimes the tribe, with which the sailor was for a time domesticated, would be on the move for days; then, perhaps, would settle down for weeks. Occasionally they lived on the sea-shore, subsisting chiefly on raw shell-fish.

Accounts like these may perhaps help us to form an idea of the life led by the sea-shore dwellers of ancient Erin.

This habit of roving from place to place for the purpose of hunting, or for fresh pasturages for cattle, continued in Ireland so late as the time of Queen Elizabeth. Spenser relates that the Irish in his time 'kept their cattle and lived themselves the most part of the year in Boolies (cow-houses), pasturing upon the mountain and waste wild plains, removing still to fresh land as they have depastured the former.' Many laws were passed to prevent indiscriminate grazing, but without avail. The late Sir William Wilde, in the year 1835, described this custom as in full force in the Island of Achill. He states that during the spring the entire population of several of the villages on the island 'close their winter dwellings, tie their infant children on their backs, carry with them their loys and some corn and potatoes, with a few pots and cooking utensils, drive their cattle before them, and migrate into the hills, where they find fresh pasture for their flocks; and there they build rude huts, or summer-houses of sods and wattles, called booleys,

and then cultivate and sow with corn a few fertile spots in the neighbouring valleys. They thus remain for about two months of the spring and early summer, till the corn is sown. Their stock of provisions being exhausted, and the pasture consumed by their cattle, they return to the shore, and eke out a miserable and precarious existence by fishing.' In the autumn they again return to the mountains, where they remain while the corn is being reaped.

A wide scope for investigation is opened up by examination of the refuse-heaps — which archæologists style 'middens'—of the primitive inhabitants, whether occurring on the sites of settlements along the seashore, in caves, near raths, cashels, or lake-dwellings. Up to the present the latter class alone has afforded much information, and proved prolific in traces of the past life of their inhabitants.

If careful examination be made of a kitchen-midden, exposed to view by the simple drainage of water from the site, then the antiquities discovered afford tolerably correct and safe data from which to calculate the age of the structure. The most usual site of the refuse thrown out of the lake-dwelling, is at the entrance through the stockade to the crannog, where was formerly the landing-stage or gangway leading to the shore. The accumulated mass of refuse, ashes, and bones—that were invariably found in a broken state for extraction of the marrow—is in some instances immense. It is estimated that at Lagore, in Meath, about two hundred tons were sold for manure; three hundred tons were exhumed from the kitchen-midden of one of the lake-dwellings in Loughrea, county Galway; and fifty tons from that of Ardakillen, county Roscommon. These refuse-heaps may be said to form a perfect mine

of antiquities, for every fractured or useless article of household gear was thrown into them. Hence, the objects, though numerous, are generally in an imperfect condition. After bones, the next most frequent 'find' consists of fragments of fictile-ware, traces of cattle, cooking utensils, spindle-whorls, articles of personal adornment, weapons of war and of the chase—in fact, all the *disjecta membra* occasioned by a continuous occupancy of the site.

Localities that had been at one time devoted to culinary purposes are occasionally discovered, sometimes in arable land, but more frequently covered by a considerable depth of bog. They are designated *falachda na Feine*, i.e. the cooking-places of the Fians or warriors. The country people relate that these places were in ancient days frequented by the Fenians or military forces of Erin, who spent part of every year in the pursuit of wild animals, and forming camps in favoured positions. In the county Waterford these cooking-places are called *Fullogh Fea*, which, it is stated, means the 'boiling'-place, or 'fire-place of the deer.'

'Here,' remarks Mr. John Quinlan, when describing these cooking-places in the county Waterford, 'wherever a strong well or spring develops into a rivulet, you will not travel far before coming on a mound by the side of the stream; it is usually hemispherical in form, and having an opening towards the stream—unless its configuration has undergone alteration from tillage, or such like operations . . . In their more perfect state they present, in shape, the appearance of a horse's foot (sole) with the shoe on; the shoe itself being represented by the protecting wall, and the sole by the flagged floor of the hearths, where the small stones were heated by fire; the heel may be considered as represented by the

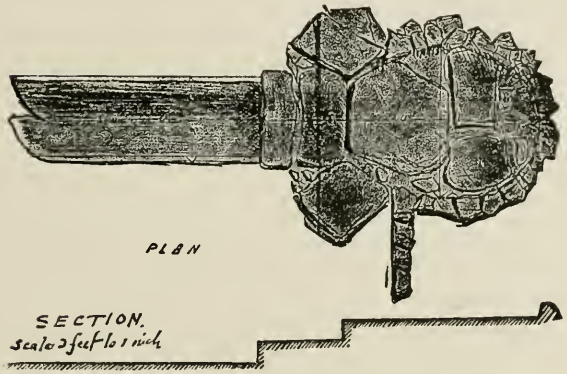

FIG. 49B.

Plan and section of ancient open-air cooking-place, Clonkerdon, barony of Decies-without-Drum, county Waterford. By Mr. John Quinlan.

opening in the protecting wall, with the descending step adjoining and overlapping the trough, by which the stream from a well ran, and into which the meat was thrown. In this instance the trough is composed of an oak-tree hollowed out, and when cleared of the burned stones and rubbish, was found to be very much decayed. . . . The floor of the hearth is composed of heavy sandstone blocks, which appear to have been dressed and neatly fitted into each other, and the steps are well put together and very smooth . . . The floor of the hearth, the steps and trough all have a decline towards the water. The theory which suggests itself is, that here people having lighted a great fire, the stones, made red-hot thereby, were easily moved down the incline into the trough holding water from the stream; that these stones, when cooled, were taken out, flung back all around the fire-place, to be again heated and returned to the trough until the water boiled, when the meat was put in and kept simmering or boiling by a continuance of the process. At the present time we know that many tribes of savages cook their food in a similar manner.'

In New Zealand, the Maories, when proceeding to cook, heat in the fire the hardest stones they can find; on these the food is laid, and is then covered with leaves and earth, an opening being left through which water is poured. This, on coming in contact with the heated stones, causes the formation of steam, by which means the food is cooked. On the land of Mr. James Ryan, of Foulkrath Castle, county Kilkenny, was discovered a primitive cooking-place, in which the early inhabitants of the country 'baked or roasted an animal whole, in a pit lined and covered with small heated stones, over which, during the cooking process, clay

was heaped.'* In England, also, in some of the swamps in Essex, and elsewhere, heaps of burnt clay are of frequent occurrence. In several places in Ireland, near the edge of bogs, piles of burnt stones were observable, more especially near the lake-dwelling in Moynagh Lake, county Meath—a peculiarity noticed also near the sites of lake-dwellings at Drumkeery and other localities. Similar discoveries have been made in connexion with some lacustrine settlements in the Swiss Lakes. There are, or were, eight such heaps near Moynagh Lake; the most remarkable of the series situated a short distance to the north; there is a pile of stones at the southern verge of the ancient lake-shore; and the other piles of burnt stones or 'fire-places,' around the edge of the bog, are of small size and unimportant. Remains of this class are common in the district; there is hardly a moor on which may not be seen at least one heap; the peasantry, as is usually the case with regard to ancient remains, impute their origin to the Danes. The name of the ancient Irish war-goddess, Morrigan, is found connected with many of these 'fire-places,' particularly those of great size, styled *Fulacht-na-Morrigna*, i.e. Morrigan's hearth. One was situated at Tara; another, near the fairy mound of *Sidh Airfemhin*, in Tipperary, is mentioned in an Irish tract styled the 'Little Dialogue,' which is contained in the 'Book of Lismore,' and is of interest, as it demonstrates the fact that these cooking-places were situated within easy distance of a good supply of water. Two heroes, having erected a hut and made a cooking-place, went to a neighbouring stream to wash their hands. 'Here is the site of a *fulacht*,' said one. 'True,' replied the other, 'and this is a *fulacht-na-Morrigna*,

* *Journal R.H.A.A.I.*, vol. iii., 4th series, p. 153.

which is not to be made without water,' *i.e.* there should be a supply of water near at hand.*

In the summer of 1887, when a road was being formed through a bog in the townland of Knockaunbaun, in the county Sligo, traces of numerous fires were discovered at from five to seven feet beneath the present surface. These sites were all paved with small stones for the purpose of forming the hearth; six inches of black mould lay between the paving and the red clay. The labourers cut across the track of a group of small fires, and also a large one, the hearth in the latter being semicircular in shape, and thirty feet in diameter. Under it lay about three cartloads of paving stones, but from the combined action of fire and water they all crumbled in pieces when shovelled up to the surface. In sinking a drain, the site of another large fireplace, forty feet in length, became exposed. It was paved with the same kind of stones, covered with a quantity of charcoal and ashes.

In the year 1864, when a farmer at Ardnahue, county Carlow, was sinking for gravel, he observed that the subsoil, in one place, was of a darker, richer, and softer

* *Proceedings Royal Irish Academy*, vol. x., pp. 439, 440. W. M. Hennessy. He further remarks that 'the name of the Morrigan enters not a little into the composition of Irish topographical names. In the present county of Louth there is a district anciently known by the name *Gort-na-Morrigna*, or the "Morrigans Field," which her husband, the Dagda, had given to her. The "Book of Lismore" mentions a *Crich-na-Morrigna* as somewhere in the present county of Wicklow. Among the remarkable monuments of the Brugh, on the Boyne, were *Mur-na-Morrigna*, the mound of Morrigan; two hills, called *Cirr* and *Cuirrel*, or comb and brush of the Dagda's wife, which Dr. Petrie has inadvertently transformed into two proper names; and *Da Cich na Morrigna*, or the Morrigan's two paps in Kerry, not far from which is a large fort bearing the suggestive name of *Lis-baba*. The name of Morrigan is also probably contained in that of Tirreeworrigan, in the county of Armagh.'

description than the surrounding earth, and was mixed with bones in a fragmentary condition. The farmer was so struck with its apparent richness that he utilised the earth as manure to the extent of some seven hundred cart-loads. A sample was sent to a chemist, who gave it as his opinion that it was worth nine shillings a ton. This stratum of rich earth filled what had evidently been a trench of irregular curved shape, with occasional offshoots of minor extent, the whole being interspersed with animal bones. These consisted of the remains of oxen, sheep, pigs, and goats, together with portions of several crania; in many instances a fractured depression in the centre of the forehead indicating that death had been caused by a blow from some heavy and blunt instrument; there were also traces of the skeletons of two small horses, the skull of a dog, and the bones of fowl. There was nothing in the surface or appearance of the field to indicate the existence of this 'midden.' The trench, made in following the layer of rich earth, was, in some places, at least 10 feet deep, and measured from 2 to 6 feet in breadth. At the bottom of the trench, in several separate spots, stones in circular form were found, evidently constituting hearths, the centre filled with charcoal, in which were 'clinkers.' Seven stone-hatchets, portions of a quern, some bone-pins, a fragment of comb, a few pieces of coarse fictile ware, and pieces of iron which, together with the prevalence of 'clinkers,' or the slag of iron-smelting, showed that the deposit belonged to a comparatively recent period.*

It is well known that primitive man, like many savage tribes of the present day, obtained fire by the rapid

* *Transactions Kilkenny A. S.*, vol. v. (new series), pp. 117, 118.

rotatory motion of a piece of wood inserted in a socket of the same material. The practice of thus producing kindling by friction is, strange to say, still in existence in the form of a charm or preventative against disease in cattle. When a disease or swelling of the head amongst cattle called 'Big Head' appeared, every fire was extinguished in the townland on which it had broken out. The inhabitants then assembled at the affected farm to kindle what was called a 'Need-Fire,' which was done as follows:—Two men commenced to rub two sticks together till the friction produced a flame. It was hard work, each man rubbing in turn. When the sticks had ignited, they collected dry 'scraws'* covered with soot from the dwelling-houses, in order to produce a great smoke. The affected cattle then had a piece of wood inserted in their mouths, to keep them open, and the head was held over the smoke till water ran plentifully from mouth and nostrils, and the cure was completed. Every fire that had been extinguished was then re-kindled from the 'Need-Fire.'†

Ordinary bones of animals burn freely, one-third of their constituents is combustible, and there is oil and marrow in the interior of the larger bones. Bones long buried may still retain a large proportion of animal matter. In an article published in 1825, Dr. Hart describes a bonfire of a heap of bones of the extinct Irish elk lighted in celebration of the Battle of Waterloo. The remains of the Megaceros gave out as good a blaze as the bones of horses then usually employed on such occasions.

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* From the Irish *scrath*, i. e. a sward or sod.

† *Journal, Royal Historical and Archæological Association*, vol. ix. Grimm cites a very similar superstition as occurring in the island of Mull.—*Teuth. Myth.*, p. 608.

It is quite possible that the masses of half calcined bones found on the sites of ancient funeral pyres, in the kitchen-middens of raths, cashels, lake-dwellings, and sea-side settlements, are the remains of fuel so employed in the cooking of primitive times. Fires made of bones are still used by savage tribes; even Darwin, in his *Voyage Round the World*, expresses surprise at the skill with which his guides in the Falkland Islands substituted the skeleton of a bullock, recently killed, for ordinary brushwood, of which there was a scarcity, and mentions the hot fire made by the bones. He was also informed that in winter a beast they had killed was often roasted by them with the bones belonging to it.

The dwellings of the ancient Irish having been briefly noticed, it may be well to glance at the means they possessed of locomotion. If we were to place confidence in all the various articles in museums and collections described as 'horse furniture,' the early inhabitants were a sporting race. It would seem that whenever an antiquary is in doubt respecting the original use of an article, the question is at once solved by relegating it to ancient harness, or to a chariot. It is certain, however, that at one time the Irish did possess chariots, but at what date these vehicles were introduced, it is at present impossible to decide. The Irish designation for a chariot, *carpat*, evidently borrowed from the Latin, *carpentum*, points to its foreign origin. The late W. M. Hennessy was of opinion that chariot-racing in Ireland preceded horse-racing; and that for the first three centuries of the Christian era, the chariot, in contradistinction to the horse, would appear to have constituted the universal means of locomotion in the country; but notwithstanding the glowing descriptions left us to the

contrary, we may well believe that these vehicles were little better than the heavy waggon of the Roman husbandman. At the close of the third century, chariot-racing is apparently superseded by horse-racing, the stories of the Fenians, and pieces of perhaps more genuine history of the period, represent horse-racing as the delight of kings and chieftains. Saints, both male and female, are described as going from place to place in chariots ; for it is to be noted that the early converts

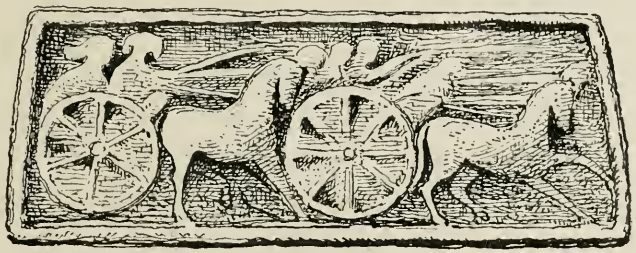

Fig. 50.—Chariots, from a compartment on the North Cross of Clonmacnoise. (Christian period.)

to Christianity were from the highest grades of Pagan society, and on the early sculptured crosses, chariots and horses are frequently depicted.

In representations, sculptured on Irish crosses, of chariots of a later date, the wheels appear then to have been greatly increased in size, to have been, in fact, higher than an ordinary horse. This may, however, be the fault of the sculptor, who was, doubtless, ignorant of correct ideas of proportion. The wheel of one chariot has eight, and the second only six, spokes. Fig. 50, drawn by W. F. Wakeman, is taken from a compartment on the east side of the North Cross at Clonmacnoise.

Figure 50A represents a fragment of the fittings of a chariot. In the year 1848, workmen, when making a railway-cutting near Navan Station, adjoining the River Boyne, found it, in company with other relics, which allow an approximate calculation of its antiquity to be made. It belongs to an early period of the establishment of Christianity in Ireland. With it were associated human osseous remains, and the skull and skeleton of a horse. There are two purposes to which this article (fig. 50A) could be assigned: that of an attachment of a trace or a straddle-terret for suspending the back-band or the shafts of a chariot. 'It is a boss of iron, $3\frac{3}{4}$ inches in diameter, covered on its external face with a plate of white metal, from the centre of which projects a massive bronze stud, in the shape of a dog's head, like that of a bloodhound, $1\frac{1}{2}$ inches long, having a human face engraved on its extremity. From a large aperture in this projection depends a piece of a bronze chain, composed of two rings and two double loops, the latter resembling those of iron found in crannogs.'* The discovery of remains of chariots, horses' bits, and harness on the sites of lake-dwellings, suggest the question, how did these relics get there? The gangways and entrances to some crannogs must have been stronger and wider than hitherto they are supposed to have been.

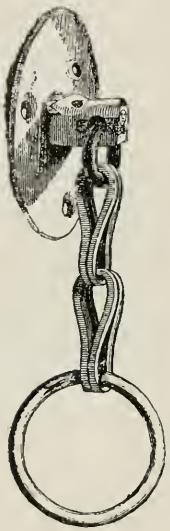

Fig. 50A.
Portion of Fittings of a Chariot.
(Christian period.)

* *Catalogue, Museum Royal Irish Academy*, pp. 573, 611.

The three cognate races, the Gauls, the Britons, and the Irish, made use of chariots in war. With regard to the two first, there is evidence of the fact in contemporary Roman writers, and with regard to the latter, evidence to the same effect is given by Irish writers. From comparison of several passages in old Irish MSS., the late J. O'Beirne Crowe was of opinion that, in the times therein described, the framework of a chariot consisted of wood, the body of great height, was formed of wickerwork, and it had two hind shafts. There were but two wheels, probably at first made of solid wood, subsequently of bronze, and afterwards of iron, the average height of the wheels must have been under three feet. There was a hood or covering to the body of the vehicle, and some interior furniture. It had a pole to which a single yoke for two horses was attached.

When used in war the chariot was covered along the edges, and at every available point, with hooks, nails, spikes, and other devices, so placed as to serve defensive and offensive purposes.* It is curious to compare this description with the chariots sculptured on the cross of Killamery, on the north cross of Clonmacnoise, at Monasterboice, and on the cross in the churchyard at Kells. Caesar's description of the chariots of the Britons, and their management in war, should be carefully read.

If Irish records are to be credited, there were in ancient days, regularly made roads radiating from Tara into each of the other provinces. However, no such traces as are left by Roman road-making in England have been discovered in Ireland, where the roads were

* *Journal R.H.A.A.I.*, vol. i., 4th series, p. 422.

most probably mere tracks of a certain width cleared of undergrowth and of trees. They could not have been either paved, or otherwise made serviceable for traffic, or we should find evidence of them, as is the case with those roads that were made by the Anglo-Normans. O'Donovan, however, states that the ancient Irish possessed numerous roads, 'which were cleaned and kept in repair according to law.' Wooden roads, across deep, treacherous morasses have been frequently

Fig. 51.—Section of roadway in soft ground.

discovered under a growth of peat, for example, one evidently leading to a lake-dwelling in Loughnahinch, county Tipperary; another submerged roadway, constructed somewhat like an American 'corduroy road,' was discovered in a bog between Castleconnell and the Esker of Goig, county Limerick. In the north portion

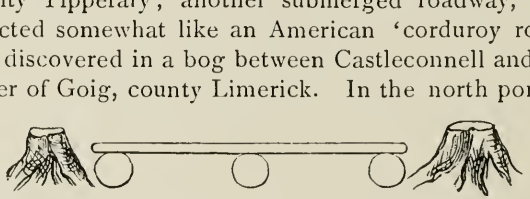

Fig. 52.—Section of roadway in firm ground.

of the Wexford estuary was a causeway that, in ancient times, connected Begerin with other islands; there were two rows of oak piles, on which apparently had formerly been transverse beams. In Duncan's flow bog, Ballyalbanagh, county Antrim, was a wooden roadway, under 20 feet of peat. The road was 7 feet wide, formed of longitudinal oak-beams, sheeted with transverse planking of the same material. In the centre of the bog, where the foundation was soft, there were eight longitudinal beams under the planking (fig. 51), whilst

in firmer ground, near the edge of the bog, there were but three, one at each side and one in the centre (figs. 52, 53). On an ancient wooden causeway, or road, in Ballykillen Bog, King's Co., a remarkable axe, formed of bone, was found 7 feet below the then surface of the bog; with it was a flint arrow-head, in a briar-root shaft, the thong which tied it still adhering.

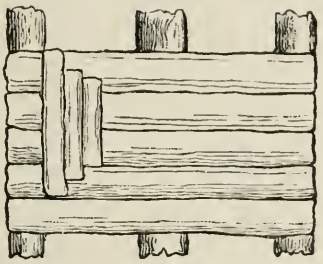

Fig. 53.
Plan of part of roadway showing repairs.

These wooden causeways were in reality but well-formed *kishes*, or roads made to float on the surface of river, marsh, or quagmire. The most elaborate were made on a foundation of hurdles; those less carefully constructed, on branches of trees, on which a thick coating of rushes was strewn.

Passing from land communications to those by water, it would appear that a canoe, formed by hollowing out the trunk of a tree, had been the first attempt at boat-building. To form a boat in this way, a people, even in the rudest state of existence, must possess some considerable ingenuity. It may be safely concluded, however, that unless implements, or articles of stone or bronze, are found with 'dug-outs,' they do not of themselves carry us back to pre-historic times, nor do they necessarily indicate the great antiquity commonly attributed to them. Canoes have been found of the oldest type known, and yet containing articles of iron of very modern form. In the year 1852 workmen dug up, at about four feet below the bed of the river Blackwater,

several single-piece canoes, formed of the trunks of trees, and evidently hollowed out by the action of fire and implements of stone. The canoes were of

Fig. 54.—Single-piece Canoe from Toome Bar.

Fig. 55.—Single-piece Canoe from the Boyne.

Fig. 56.—Single-piece Canoe from Cahore, County Wexford.

various sizes. One measured thirty feet in length. Close to them some skulls were discovered, one of which retained marks of a severe wound on the crown. It is conjectured that on the spot there had been an

aquatic struggle, in which some of the occupants of the canoes were killed and 'the fleet' sunk. Various discoveries have been made of canoes beneath the waters of lakes, beside the site of lake-dwellings, or under great accumulations of peat; and owing to the preservative properties of peaty matter, these canoes are in a fairly sound state when first dug up; but they get out of shape during the process of drying. Upwards of sixty recorded specimens have been discovered up to the present.

Irish single-piece canoes may be roughly divided into three classes. The first (figs. 54, 55), generally either sharp or rounded at both extremities, average 20 feet in length and about 2 feet in breadth; some, however, have been discovered square at both ends; again, some are flat-bottomed, and others round. The inside depth varies, according to their state of preservation.

The second kind of canoe (fig. 56) is of greater length. One found, measuring 40 feet, was round in the bow, but square in the stern, which was formed of a separate piece let into a groove within a few inches of the extremity. This make of boat is more heavy and clumsy than the preceding one.

The third variety of canoe is trough-shaped, and has been very appropriately designated 'the portable canoe.' Its length is from 8 to 12 feet. It is square at both ends, round in the bottom, having projections at either extremity, apparently for the convenience of carrying it.

There is a peculiarity in the construction of some of these canoes, for which, up to the present, no theory accounts in a satisfactory manner, *i.e.* the number of holes which, in many specimens, are drilled through the sides or bottom of the canoe. In one large 'single-piece'

boat (upwards of 42 feet in length) the total amounted to 48 perforations. This extraordinary number is unusual, for some have but three, some six, &c. These holes are drilled with apparent regularity, and their relative positions emphatically proclaim marks of design. Some are pierced right through the bottom, generally about 5 inches in thickness. In some of them plugs of pine were found, evidently inserted from the interior. Their great number preclude the possibility of their being drainage-holes.

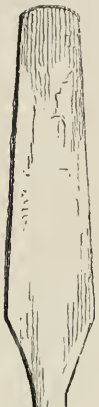

Fig. 57. Wooden Canoe Paddle from Toome Bar.

Numbers of wooden canoe-paddles have been found. Fig. 57 represents one 2 feet 7 inches long by $5\frac{1}{2}$ inches across the blade.

Fig. 58 is supposed to have been employed as an anchor. The shank must have been of wood, and lashed to the stone.

Fig. 58. Stone, probably used as an anchor.

There is yet another kind of boat, the currach, that was employed by the early inhabitants. Of it, however, on account of the perishable materials of which it was composed, no materials have been exhumed. Nothing can be more simple than the construction of these skiffs. Only two materials are requisite, and they the most accessible in the country, willow-rods and hides of animals. When Caesar had boats constructed in Spain, after the manner learnt by him in Britain, it is said that 'the keels and ribs were made of light timber,

the rest of the hull being woven together with basket-work, and covered with hides.'

> 'The bending willow into barks they twine,
> Then line the work with spoils of slaughtered kine.
> . . . . . .
> On such to neighbouring Gaul, allured by gain,
> The bolder Britons cross the swelling main.'

Pliny describes these boats as being in use in the British Channel. Solinus, describing the rough sea between Britain and Ireland, mentions a similar class of skiffs. Adamnan (in his *Life of St. Columba*) refers to a voyage made in a currach by St. Cormac.

The currach, the *carabus* of classic writers, is thus described by Isidorus:—'Carabus, parva scapha ex vimine facta, quæ contexta crudo corio genus navigii præbet.' It is also mentioned by Festus Avienus. According to a rare pamphlet entitled *A Short Tour of the County of Clare*, by John Lloyd, printed in 1780, the currach seems to have been then still in general use off the coast. The author styles it, 'an artificial curiosity made use of by certain Individuals. . . . It's a kind of Canoe or Currach, compos'd of Wattles, cover'd with Raw Hydes. With this Indian-like construction, they Fish successfully in the proper Season, and Paddle some Leagues out in calm weather; In the Month of August there is often a large Squadron of them together in the Bay of Liscanor, and in this Fishing Posture they appear like so many Porpoises on the Surface; Each Man carries his Wicker Boat, or Canoe, on his Back, occasionally to and from the Shore' (fig. 59).

The currach is still in use in remote parts of England and on some parts of the coast of Ireland, in shape and build similar to that of thousands of years ago.

There seems to be no foundation, in fact, for the extravagant accounts of the ancient glories of the Irish

Fig. 59.—Currach, as recently used in Ireland.

navy, which consisted, until the advent of Christianity, of some kind of large currachs; these were in use in Ire-

land at a very early date. One monarch of ancient Erin was known as *Eochaidh Uairceas*, in consequence of his having either invented or developed the fabrication of small boats. Now *Eochaid* (*anglice* Achy) signifies a horseman, and *uairceas*, a small skiff, so the expression 'horse marine,' in its inception, is not a modern Irish bull, but the very appropriate name of an Irish king who, it is alleged, lived nearly 2500 years ago.

The civilization of a nation may, to a certain extent, be gauged by the architectural outcome of its religion; up to the present time no authenticated remains of any temples or religious edifices of the ancient Irish can be pointed out. A fierce and warlike race, who raised megalithic monuments to the honour of their chiefs, appear to have erected these memorials to commemorate their dead, and the worship of a deity or deities in nowise entered the imagination of their builders, though, in aftertimes, the dead became to a certain extent deified. Although the ancient inhabitants, at this stage of human existence in Erin, were doubtless somewhat removed from what we would now regard as mere savagery, yet the architectural remains which they have left do not exhibit traces of the high culture and civilization claimed for them by many enthusiastic writers.

CHAPTER VII.

SEPULCHRES — PILLAR-STONES — SPEAKING-STONES — HOLED-STONES—STONE CHAIRS—ROCKING-STONES.

Not only from the face of the country, but also from the memory of its present inhabitants, the memorials of its dead are rapidly vanishing, and it is apt to be forgotten that, from the gigantic chambered carn of New Grange to the simplest cist, the megalithic structures of Ireland are but the graves of a primitive race. Since these huge weather-beaten blocks were piled up by primitive man, how often the form of worship has changed. Time has effaced the race that reared them, together with their religion, but the monuments remain. The most important of our megalithic mortuary structures are, by Act of Parliament, protected from dilapidation and destruction, but unfortunately the protection afforded is more nominal than real. Any person can now delve amongst the bones of primitive interments without impediment. Such should not be permitted, except under proper restrictions and supervision, for the contents of sepulchres are often of more importance than the structures themselves, and are more likely to throw light on the unwritten history of the remote past; yet, despite many disadvantages, and much apathy in archæological investigation, we have vaguely ascertained the manner in which the early

inhabitants treated their dead. Except in remote and mountainous localities, the peasantry do not now take the same interest as formerly in the megalithic structures reared by their 'rude forefathers'; they do not venerate monuments from which legend and glamour have alike fled, and of which they do not understand the origin. Fortunately those monuments that still exist are, as a rule, situated on ground unfitted for cultivation, or they are of, perhaps, such magnitude as places an effectual barrier against removal for purposes of agricultural improvement. Climate, the productions of the country in which they dwell, and the habits of life thereby engendered, influence strongly the character and acts of a people; and although the general instinctive feelings of primitive man led him to honour the last resting-place of his dead, yet the memorials thus erected necessarily depended upon the kind of materials at hand that were available for the purpose; thus the geological nature of the surroundings must be taken into consideration, not merely with regard to megalithic structures, but also to cashels, some of which, according to the districts in which they were found, had been constructed with stones of small size, whilst, in other instances, the stones are of greater magnitude.

The first species of megalithic sepulchral-structure to be considered is the 'cromleac,' the 'dolmen' of English and French writers, the 'labby' of the Irish-speaking peasant. In the Abbey of Knockmoy, county Galway, there is an Irish inscription belonging to the close of the fourteenth century, which offers an unquestionable example of the use of the word *leaba* (labby), *i.e.* bed, to designate a sepulchre. It shows that the natives thoroughly understood the term, when applied to the rude stone monuments of Ireland, to indicate,

not merely sepulchres, but places of rest. To the mind of the primitive race who reared them, they were, most probably, as truly the habitations of the spirit of the dead, as were their dwellings the abode of the living; they were the 'beds' into which all the members of the clan or family were ultimately to be laid in their long repose. Hence reverence to the dead developed into worship of the dead, then to their deification; and upon the appearance of new creeds, a deterioration in their attributes set in, and finally even of their personal appearance. When the two daughters of King Leoghaire saw St. Patrick with his attendants, they regarded them as apparitions, *Duinĕ sidhe*, gods of the earth, or phantoms, whilst in Colgan's time such spirits had degenerated into fairies.

We, nowadays, bury our dead out of sight and shrink from all associations connected with death; but with the ancient Irish there was such a constant communication with the receptacles of the dead, that of all the monuments left by the primitive inhabitants none bring us into such close contact with them as a careful examination of their last resting-places.

The ancient Irish believed that their dead, though deposited underground, still lived the same life as on earth. This idea is exemplified in the story of the 'Cave of Ainged,' preserved in several MSS. T.C.D. The plot is as follows: Ailell and the celebrated Medb, king and queen of Connaught, were celebrating the feast of *Samain*—on November night—in their palace of Croghan. On that night the *sid*, or spirits inhabiting the tombs and other localities, were allowed to emerge from their retreats and run to and fro upon the earth. To test the valour of his household the

king offered a suitable reward to any young warrior who would sally from the banqueting-hall and tie a coil of twisted twigs upon the leg of a man whom he had caused to be hanged, and who was then suspended just outside the palace.

The only one who succeeded was a hero named Nera; but on completion of the act the hanged man came to life and imposed numerous commands on his resuscitator, with all of which he had to comply. When released from his task he saw the palace of Croghan in flames, and a host of strange men plundering the buildings. He followed them into the cave of Croghan, and into 'the *sid* of the cave.' Here he was immediately taken prisoner, kept at hard work, and was compelled to marry one of the women of the *sid*. He finally managed to escape to upper air, and returned to the king of Connaught, with such an amount of information regarding the *sid* and its contents, that on a succeeding *Samain* or November day earthly forces broke into the treasure-house of the underground spirit-world, and carried off great booty and costly treasure.

Even the Greek mind did not rise to the conception that the soul after death might become a greater spirit power than when on earth, or that it could exist without a physical body. Their departed lived—like the characters represented in the Irish legend—the life they had been accustomed to on earth, and hankered after the fleshpots of the upper world.

When we trench on the commencement of written records the idea of a spirit or soul comes into existence; but it cannot even then be quite divorced from the body. In 'The Pursuit of Dermod and Grania,' Aengus, the magician, arrived on the scene after the hero's death, and he carried the corpse from the heights of Benbulbin

to 'the Brugh on the Boyne,' explaining his action by stating that although he could not restore him to life, he would 'send a soul into him, so that he may talk to me each day.' This strange passage is also elucidatory of the constant communication supposed to be carried on between the abodes of the living and of the dead.

In pagan sepulchres the cromleac occupies a leading position for its grandeur and simplicity. The theory of progressive development naturally suggests that the more simple the construction, the more remote is its age, and the best authorities who have studied the megalithic structures of Ireland are of opinion that they are not all of one period, although they may be the work of one race. If the remains deposited under cromleacs are similar to those found under the other rude-stone monuments, and if we can trace these characteristic forms of sepulchral monuments back to the East, it is likely that the race who reared them came also from the East; for modern research traces such an early and megalithic building people from the far East—a people who once spread themselves over the greater part of Europe, Asia, and the north coast of Africa.

Between the lowly cist, composed of four or more flags with a covering-stone, and a gigantic chambered carn, there is seemingly a great difference; but that the latter is a development of the former, through such connecting links as varieties of cromleac-like monuments afford, there can be but little question. The cromleac consists of a large mass of rock, poised on three or more upright blocks, all of unhewn stone, forming a rude chamber, usually open at one end, and sometimes divided internally by an upright slab; the whole bearing evidence of having been constructed on

the surface of the ground, and of having been always sub-aërial, *i.e.* never covered by a mound of earth or stones. The covering-slab, or massive rock, is generally in an inclined position; but this, it is thought, may be occasioned by the sinking of the uprights on which they are poised, for it is unlikely that, without carefully prepared foundations, all the supporting pillars would sink in an equal degree, under the superincumbent weight. 'This general disposition of the "table,"' remarks W. F. Wakeman, 'has been largely seized by advocates of the "Druid's Altar" theory as a proof of the soundness of their opinion that these monuments were erected for the purpose of human sacrifice. Some enthusiastic dreamers have gone so far as to discover—in the hollows worn by the rains and storms of centuries on the upper surface of these venerable stones—channels artificially excavated, for the purpose of facilitating the passage of a victim's blood earthwards!'* Cromleacs are, when undisturbed, almost invariably surrounded by a circle of large stones. The circle is often double; the inner one is formed of smaller stones placed edge to edge, and these being in many instances very diminutive in size, they generally escape observation on a cursory examination, as the gradual increase in height of the surface-soil has either covered them completely, or they now protrude, at intervals, only slightly above the present level. In rare instances there occurs a third circle within the second. Whatever form, however, the enclosure around cromleacs or other megalithic structures may assume, it is certain that it formed the external mark or barrier, by which the place of interment was distinguished and cut off from

* *Archæologia Hibernica*, p. 57.

the surrounding area, as regarded trespass of man or beast.

Keats thus happily compares his 'bruised' Titans to a ruined stone circle:—

> '. . . . one here and there
> Lay vast and edgeways like a dismal cirque
> Of Druid stones upon a forlorn moor.'

The finest stone circle in Ireland may be seen at Wattle Bridge, near Newtownbutler; some of the boulders composing it are over sixteen feet in length. Many Irish prehistoric remains are, in extent and rude grandeur of construction, unmatched by the same class of monuments in Great Britain.*

Cromleacs are sometimes styled 'Giants' Graves' by the peasantry, who probably made the very pardonable mistake of confusing great men with big men; perhaps the size of some of the monuments first gave rise to the idea that giants were buried in them. It is not, however, always the greatest men—either mentally or physically—that have the largest monuments erected over them, and if some of these hitherto undisturbed tombs were scientifically examined, it might be discovered that their occupants belonged to a primitive and undersized race. Some antiquaries hold that all our cromleacs, great and small, had been originally covered either by a carn of stones or by a mound of earth. That such was not the case, with very many examples, can be abundantly proved, particularly with regard to those monuments still existing in remote localities, and as yet 'untouched by Time's rude hand' or that of the modern agricultural vandal; also those situated on the summits

* *Journal R.H.A.A.I.*, vol. v., 4th series, p. 538: W. F. Wakeman.

of mountains, or in localities so abounding in stone, that no temptation was presented to the spoiler. Chambers, or cists covered with flat stones, have been found under a mound of earth or of stones, but universal tradition and the present appearance of cromleacs assure us that they were ever in the same sub-aërial state.

On this subject G. H. Kinahan remarks that 'in the barony of Burren, county Clare, there are, in different places, cromleac-like structures; these could never have been enclosed in either stone or earthen mounds, as they are erected on the bare limestone crags.'

Cromleacs, as a rule, occupy situations similar to those in which tumuli occur; yet, notwithstanding this, cromleacs invariably stand alone, *i. e.* are sub-aërial—uncovered save by the table-stone—in contradistinction to the cists which are frequently covered. It cannot be supposed that, had the cromleacs been denuded by human agency, no vestige of an original covering of stones or clay would remain; or, admitting the complete and unaccountable removal of the superincumbent layer or layers, why then should this part, containing the largest, best, and most useful stones for building purposes, remain perfect, with its interment sometimes untouched? It is evident that, as a rule, cromleacs were erected without much attempt at nice adjustment of the side-stones, or supports; whilst on the other hand, traces of care and trouble are observable in the construction of most of the covered cists.

The top-stone of the cromleac of Mount Brown, near Carlow, is computed to weigh 110 tons.

The table or covering-stone of a fine cromleac at Howth measures 18 by 20 feet in length, its thickness being upwards of 8 feet; the block has been computed

to weigh about 90 tons. Many fine examples of this class of megalithic monument are in close proximity to Dublin, and will, to an antiquary, well repay the trouble of a visit.

The finest monument of the Moytirra series of rude stone monuments in the county Sligo presents a good example of a large cromleac (fig. 60). The country people commonly call it 'The Labby,' the Irish-speaking natives *Leaba Dhiarmada agus Grainné.* The covering-stone, oblong in shape, is of immense size; it averages 15 feet 6 inches on two sides, 8 feet 6 inches at the extremities (fig. 61), and the same in depth. There are apparently six supports to this stone, but the weight rests really on only four; it is composed of limestone, and taking its usual weight per cubic foot, the mass must weigh close upon 75 tons.

Fig. 62 gives a good idea of the Ballymascallan cromleac, near Dundalk, locally known as the 'Puleek Stone.' The cap-stone, a basaltic erratic, computed to weigh 46 tons, rests on three slender supports, the entire structure having a total height of 12 feet. The small stones on top of the table-stone are said to be there thrown by the credulous, who believe that, if one rests there, the thrower will be married before the expiration of a year.

Fig. 63 is a view of Legananny cromleac, situated on the slope of Legananny mountain, about nine miles from Castlewellan, county Down. It is 10 feet in height, the cap-stone being 11 feet 4 inches by 5 feet, and about 2 feet thick.

In the townland of Tawnnatruffaun, parish of Kilmacshalgan, county Sligo, may be seen a fine example of a cromleac (fig. 64). Unfortunately the support at its north-west termination has fallen inwards, thus

FIG. 60.—Side view of Cromleac in the townland of Carrickglass, county Sligo. Weight of cap-stone about 75 tons.

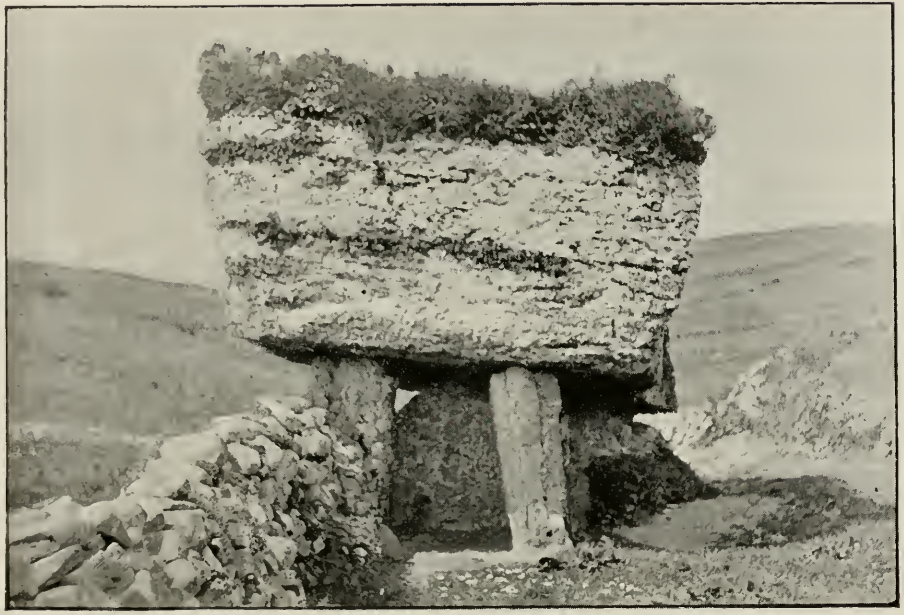

FIG. 61.

End view of Cromleac in the townland of Carrickglass, county Sligo. Weight of cap-stone about 75 tons.

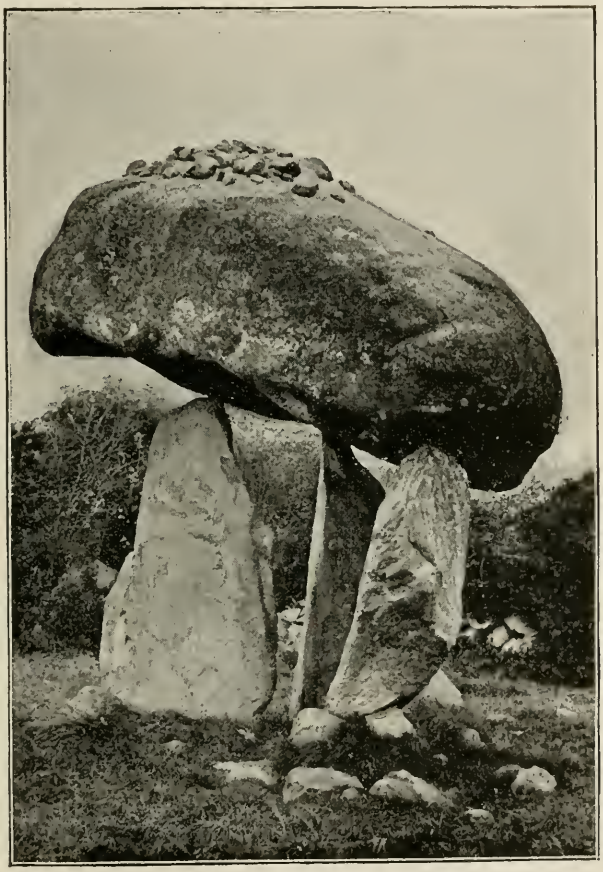

FIG. 62.

Ballymascallan Cromleac, or 'The Pulcek Stone,' near Dundalk. Weight of cap-stone 46 tons. From Welch's Irish Views.

FIG. 63.

Legananny Cromleac, Castlewellan, county Down. Ten feet in height.
From Welch's Irish Views.

diminishing the average height above ground of the level of the under surface of the covering-slab, which had been originally in all probability upwards of 6 feet. The table-stone measures 11 feet 6 inches by about 9 feet, but only averages a little over 2 feet in thickness.

Of the entire series of cromleacs at Carrowmore, near the town of Sligo, that represented by fig. 65 is the finest and best preserved. Indeed it, and its sur-

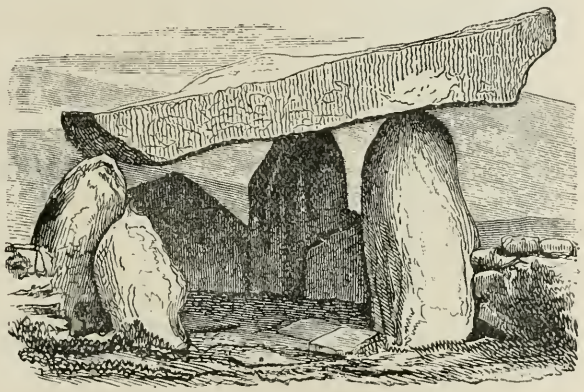

Fig. 64.—Tawnatruffaun Cromleac, county Sligo. About 7 feet in height.

rounding circle (fig. 66), may be considered perfect; whilst its situation on the ridge of a hill gives it an imposing and picturesque effect; its porch-like entrance is very remarkable. The cromleac, though the largest of the group, is but 7 feet in extreme height. Dr. Petrie, who examined most of these sepulchres, left no record of a search having been made in it, yet it had evidently undergone a thorough clearing out. The soil, however, was well re-sifted, and the corners and crevices carefully examined. The

usual flagging at the bottom of the chamber had been removed, but a couple of stones still remained in position at the angles: here were found eighty small fragments of bone, greyish-white in colour, apparently calcined, some traces of the bones of animals, crustaceæ, &c., and a worked flint. This flake would, in the north of Ireland, be considered of very little value: found,

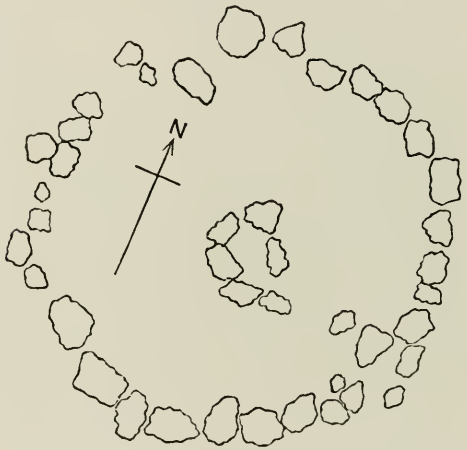

Fig. 66.—Ground Plan of No. 7 Monument, Carrowmore.
(Scale 20 feet to 1 inch.)

however, in the West of Ireland, at a distance from a flint formation, it is replete with interest, and points to traffic or barter with the North, for flint proper or chalk flint is only found in very few localities in Ireland, chiefly in the counties Antrim, Down, and Derry.

Next to the cromleac may be classed the cist—sometimes styled the kistvaen, or stone-chest—a rude rectangular chamber of four or more stones, slab-like in

FIG. 65.

General view of Cromleac (No. 7), and Stone Circle, Carrowmore, near Sligo. From Welch's Irish Views.

form; in some instances there is a double row, covered with a flat flag or flags, constructed either *below* or *on* the soil; either *sub-aërial* or *covered* with a mound of clay or stones. The floor, in general, is rudely flagged, and the sides of the cist are sometimes lined with low, narrow flags; these cists or chambers, both uncovered or covered with earth or stones, are often grouped together in curious patterns, in lines, single, double, or triple, in the form of a cross, connecting stone circles, so as to form a dumb-bell—in fact in all possible combinations.

Sometimes, but rarely, the slabs over covered cists containing cinerary fictilia are 'shaped like a mill-stone'; two such were noticed in the county Sligo. In the summer of 1848 a swamp in the demesne of Milverton (through which a stream ran) was drained. On the subsoil, beneath the peat, were found the remains of a diminutive water-mill, made of oak; in the interior were two small grindstones, the one eight, the other five inches in diameter. Close to it were large heaps of bones, boars' teeth, and skulls of the wild oxen. Covering the top of a cist in a pagan cemetery in the immediate vicinity were found two similar mill-stones, one broken, the other tolerably perfect.* Other instances could be cited, but very little attention has been directed towards this subject, which must belong to the latest period of urn-burial.

Strange, fantastic, as well as purely local or descriptive designations have been bestowed by the peasantry on the rude stone monuments of the cromleac and cist-like class, and even on rude earth-fast rocks situated in widely-severed localities in Ireland.

* *Journal Kilkenny Archæological Society*, vol. ii. (new series), p. 252.

In the sandhills of Finner, between Bundoran and Ballyshannon, there is an earth-fast rock called the 'Fleatuch.' The signification of this word is unknown. At Moytirra, in the county Sligo, there is a huge rectangular block of grey magnesian limestone, nearly 18 feet in height, a little over 7 feet broad on two of its sides, and 11 feet 6 inches on the others. It conveys at first sight the idea of being a pillar-stone, but on examination it proved to be in reality an erratic boulder, placed in its present position by the hand of Nature. It was originally of greater bulk, for two immense pieces have, through the agency of frost or other natural causes, been torn from its sides, and now lie prostrate at its base. This gigantic block is called the 'Eglone' (fig. 67); no one in the neighbourhood was able to give any explanation of the word. The question arises, Could it have been an idol-stone?

The most common appellation of the cromleac is 'labby,' or 'Dermod and Grania's Bed,' this designation being derived from the well-known legend of Dermod O'Dyna's elopement with Grainné, or Grania.

Leaba-caillighe, pronounced Labba-cally,* *i.e.* the 'Hag's Bed,' is a term also given to these monuments, or more particularly, the witch 'Vera's,' or 'Aynia's Bed,' also 'The Fairy's Bed,' or 'House,' the 'Giant's Bed,'† and *Leaba-fianna*, or the Fiann's Bed.

* For example, in Frazer's *Guide through Ireland* mention is made of a curious sepulchral monument, situated about a mile from the village of Glanworth, near Fermoy, and styled 'Laba-cally,' or the Hag's-bed. The designation for a witch and a nun are in Irish pronounced, it is stated, alike. It is strange that there should be this similarity between a term describing what were the ancient goddesses of the people, and the representatives of the new religion.

† There is proof that at the time the old 'Lives' of St. Patrick were compiled, some of the rude stone monuments were then re-

FIG. 67.

The 'Eglone,' near the village of Highwood, county Sligo.

Half-way between Belleek and Ballyshannon there is a cromleac styled Labbinlee, *i. e.* the bed of the hero, thus embodying the tradition that the monument was erected over an old warrior of the forgotten past; and near Cootehill, county Cavan, there is a townland styled Labbyanlee, which doubtless also received its name from some cromleac.

Lackanscaul, *i. e.* the flagstone of the hero, is the designation of a large cromleac, in the townland of Kilmogue, county Kilkenny. Here tradition is silent with regard to the hero buried beneath.

There are also names simply descriptive of the appearance of the structure, such as the 'Grey Stone,' the 'Speckled' or 'Bracked Stone'; 'Cloghtogla,' *i.e.* the raised or uplifted stone,* in allusion to the covering boulder or rock. Then there are fanciful or poetical names, 'The Children of the Mermaid,' 'The Black Boar's Grave,' 'The Giant's Griddle,' 'The Load,' 'The Giant's Load,' 'The Grey Man's Load,' 'The Giant's Quoits,' 'Finn Mac Cumhaill's Rock,' 'Finn Mac Cumhaill's Finger-stone,' 'The Stones of the Champion,' and Cloghnaboghil, near Ballintoy, County Antrim, signifies 'the Stone of the Youth.' A circle of boulders, 27 feet in diameter, styled 'Cucullin's tomb,' and then almost covered by the sand which the waves

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garded as the 'Resting-places of the Giants'; for, when the National Saint was going round Ireland preaching the Gospel, he saw by the wayside a tomb of great size, about thirty feet in length. The saint's companions expressed the opinion that no human being could ever have attained a stature requiring such a grave; whereupon St. Patrick, to prove to his half-doubting disciples the truth of the resurrection to come, called up the gigantic inhabitant of the tomb to life!

* In the construction of these monuments a really difficult engineering feat was the lifting and proper placing on its uprights the heavy mass of stone forming its roof, which in many instances

washed on to it, was, in the last century, pointed out near Tanrego, County Sligo.

About a mile from the village of Dundonald, county Down, there is, in the corner of a field, a remarkable monument called the 'Kempe Stones'; according to the tradition of the neighbourhood, a giant is here interred who was slain by a warrior of superior strength. The locality in which the structure stands is styled *Baille-clough-togal*—the place of the lifted stone.

In a recess of a mountainous ridge called the Craigs, in the parish of Finvoy, county Antrim, there are the ruins of a megalithic structure called 'The Broadstone.' Adjoining, is a round cavity, about 2 feet in diameter, faced with stone, and called the 'Giant's Pot.' The 'Broadstone' marks the grave of the giant; a little to the northward three large upright stones are said to mark the graves of three of his followers.*

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exceeds 100 tons in weight. It is thought that the plan suggested by the King of Denmark—in a Paper, read at the annual meeting of the Society of Northern Antiquaries—as that practised by the primitive constructors of similar monuments may have been in many instances adopted. Beams would be placed, side by side, on an inclined plane, raised as high as the upper edge of the uprights, in such a way that the one end would project beyond the edge as much as the length of the great stone required, while the other would pass under the stone as it was brought up. By the help of levers and wedges the block was raised a little from the beam which carried it, and rollers were introduced. These preparations being complete, the raising of the stone might commence, and with the aid of wedges, levers, rams, and the strength of men and of beasts of draught, the block could be rolled up the inclined plane as far as the stones which were to form its supports; these last, being stayed by earth, could not shift either way, and the tram-road itself, along which the load was drawn, resting also on a solid base, would not break down. An accident of this kind could happen only when the great upper stone had entirely passed the inclined plane, and gone beyond the point of support, or the edge of the stones; but even then the stone would fall into its place, and the broken ends of the beams could be removed.

* *The Dublin Penny Journal*, vol. ii., pp. 293, 301.

FIG. 67A.

Diagram of the means by which the heavy Cap-stones of Cromleacs were probably lifted and placed in position.

(See foot-note, pp. 271, 272.)

Near Coagh, county Derry, there stands a fine cromleac, locally known as the Tamlacht or 'Plague Stone'; there are also monuments styled Ticloy, or the 'Stone House'; 'Ossian's Grave'; the 'Pooka's Grave'; Labbyeslin, 'the tomb of Eslin,' situated near Mohill; Labasheeda, 'Sheeda's Grave,' in the county Clare; Toombeola, 'Beola's tumulus,' near the Twelve Pins, in Connemara.

There are also some commonplace names given to these structures, such as *Cloch-ngobhar*, or 'The Goat's Stone,' and 'The Ass's Manger'; to the monument with this homely designation is attached a strange belief that frequently, even in broad daylight, phantom funerals are seen passing the cromleac. The procession first becomes visible a little above the monument, and, having proceeded a short distance below it, invariably disappears at a spot where formerly had been a number of pagan cists. It is believed that a phantom horseman is also frequently seen galloping around some of these structures.

The quaint descriptive expressions herein enumerated are even yet firmly rooted in the minds of the peasantry; their history, when traceable, is of interest; and, as in the strata of the rocks we find traces of extinct genera and species, so, in these expressions, fossilized forms of old-world fancies become apparent.

There is a remarkable similarity between pagan and early Christian sepulchres. The tombs of the early saints present a variety of forms: they are often rude sarcophagi, somewhat resembling pagan cromleacs or cists, whilst at other times they are small carns enclosed by a circular or quadrangular wall. In like manner, the ancient pagan cashel surrounding primitive churches on the island of Inismurray, off the Sligo coast, presents

the curious example of a *primal* monastic establishment enclosed within a wall as old as Staigue Fort in Kerry, Dun Conor, and other cashels in various parts of Ireland, all of which are acknowledged by antiquaries to belong to ante-Christian times in Ireland.

Close to the town of Ballina, in the county Mayo, there is a small cromleac, now popularly called 'The Giant's Table' (fig. 68), but by the Irish-speaking natives *Cloch-an-Togbhail*. This monument is of great interest, for it is, according to O'Donovan, the only cromleac in Ireland which can be satisfactorily connected with his-

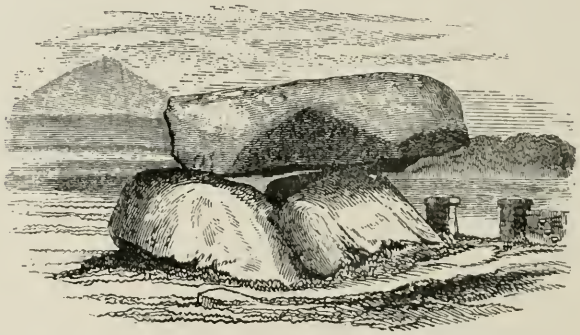

Fig. 68.—'The Giant's Table,' near Ballina; an 'historical Cromleac.'

tory. The story is as follows:—In the life of St. Ceallach it is related that Eoghan Bel, King of Connaught, when dying from the effects of wounds received at the battle of Sligo, fought in the year A.D. 537, counselled the Hy-Fiachrach to elect his son Ceallach to be king in his stead. According to the king's dying injunction, messengers were sent to Ceallach at Clonmacnoise, and he accepted the proffered dignity, despite the remonstrance and threats of St. Kieran, under whose tuition he was

then residing. The saint thereupon solemnly cursed his pupil, and although a reconciliation afterwards took place, and Ceallach, entering the priesthood, attained episcopal dignity, the curse was still efficacious, and could not be revoked (see p. 149). King Guaire Aidhne conceived a mortal hatred of the bishop, on account of his having been elected to the sovereignty; and Ceallach, in consequence, resigned his See, and retired to the seclusion of an island on Lough Conn, where, at the king's instigation, he was murdered by four of his pupils or foster-brothers, and thus St. Kieran's curse was fulfilled. Cucoingilt, brother of Bishop Ceallach, succeeded in capturing the murderers, and carried them in chains to a place in the county Sligo, since called Ardnaree, or the Hill of the Executions, where he slew them on the banks of the Moy. The bodies of the four murderers were carried across the river and interred on the summit of an eminence on the Mayo bank, subsequently called *Ard-na-Maol*, the height of the Maols, the cromleac being styled *Leacht-na-Maol*, the tomb of the Maols, from the four murderers of St. Ceallach having had the prefix Maol attached to their names. This is the story related in old Irish manuscripts to account for this megalithic structure, but all memory of the legend has faded from local tradition. It seems strange that long after the date of the introduction of Christianity, men who had murdered a bishop of the church should yet have been interred with such outward marks of distinction as would be implied by the special erection of a cromleac over their bodies. Possibly an examination of the interior of the structure might result in showing a carnal interment overlying calcined remains, the bodies being placed in an already erected cromleac in which

reposed the ashes of some long-forgotten hero, and thus in some degree prove the truth of the legend: that is to say, it might thence be inferred that the murderers of the bishop, being considered unworthy of the rites of Christian burial, were therefore consigned to a pagan grave, though, as has been demonstrated, carnal inter-

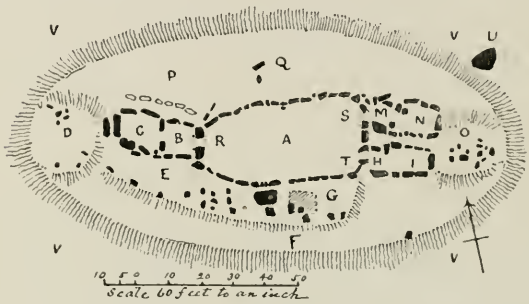

Fig. 69.—Plan of the Rude Stone Monument in the Deer Park, near Sligo, by C. B. Jones, M.I.C.E.

A, central enclosure. B, first western chamber with trilithon. C, second western chamber, two immense stones at western extremity, the outer one evidently a displaced covering-slab. D, ruined cists, or circular mound. E, traces of an enclosure. F, remains of entrance to central enclosure. G, ruined chamber or enclosure. H, eastern chamber with trilithon. I, eastern chamber No. 2. K, eastern chamber No. 3. L, eastern chamber No. 4. M, eastern chamber No. 5, with trilithon. N, eastern chamber No. 6, in which human remains and a flint scraper were found. O, ruined cists, or circular mound. P, traces of an enclosure. Q, traces of an enclosure. R, S, T, trilithons. U, immense stone just outside enclosure. V, extremity of oval mound.

ments have often been found in purely pagan cemeteries, and overlying calcined remains; it would also appear as if the native Irish, long after the introduction of Christianity, sometimes continued to bury in ancient pagan cemeteries.

The county Sligo numbers amongst its rude stone monuments one of the most remarkable primitive

FIG. 70.

Eastern Trilithons (S. T. of fig. 69) of the Rude Stone Monument in the Deer Park, near Sligo. Looking east.

structures in Ireland. It crowns the summit of a hill standing some 500 feet above the sea level, about four miles east of the town of Sligo, a short distance off the road leading to Manorhamilton, and in the townland of Magheraghanrush. It is now commonly known as the Deer Park. The monument has an overall length of about 144 feet, and consists primarily of a rude oblong or blunted oval, bounded by rough stones set on edge (fig. 69). This oval has a length of 50 feet, by 28 feet in width at its broadest part. At each extremity there were formerly a series of cists (all, with an exception, to be hereafter noticed), now uncovered. That to the east consists of a triple line of chambers; that to the west, of two large cists. At either end of these stone structures there is a slightly defined mound, 20 feet in diameter. The distinguishing features of this monument are its three trilithons (fig. 70)—seemingly the entrance or portals of the cists, of which the remainder, and more especially the roof-flagging, has completely collapsed. The late James Fergusson was of opinion that the trilithon is exceptional in Europe, and its origin not easily traced, his impression being that it was merely an improved dolmen or cromleac, standing on two legs, instead of three or more.

The most fantastical theories have been propounded as to the origin of this structure, not one of the writers having dug into or investigated its contents.

Excavations made in the four smaller divisions at the eastern and western extremities of the monument clearly demonstrated the fact that they had been formerly covered, like ordinary kistvaens, with roofing slabs, as these were found lying in the ground in a fragmentary state when the sod was turned up. In these four excavations human and animal bones were

discovered, and all were uncalcined. With them was a flake, formed of dark-grey flint, but coated over with a thick crust caused by weathering, thus giving to it a perfectly white appearance. The material was only recognizable by having been cut in two by the spade. It belongs to the class of implements placed under the heading of flint chisels. It shows traces of careful chipping for a short distance round the segment of a circle which forms its cutting edge, the remainder of the tool being left in a rough, unfinished state, with thick blunt sides.

The osseous remains showed evidence of several individuals; there were also many bones of animals and birds, all uncalcined.

Explorations in the central enclosure were not attended with equally decisive results, for although, in two instances, traces of osseous remains were found, yet in other spots the soil appeared to be undisturbed.

The conclusion, therefore, may be with safety drawn, that the eastern and western stone structures are simply uncovered kistvaens; that they were erected when inhumation burial was practised, and when flint implements were in use; but whether the central enclosure had been used for burial, or merely for ceremonial observances before committing the bodies to the tomb, could not be determined with any degree of certainty.

W. F. Wakeman states that a megalithic structure at Glen Malin, county Donegal, is almost a fac-simile of that in the Deer Park near Hazlewood.* The ground plans of the two monuments do not, however, present many points of resemblance.

The majority of the sub-aërial megalithic sepulchres

* *Proceedings Royal Society of Antiquaries*, vol. i., p. 264.

lie east and west. The oblong and cross-shaped sepulchres usually have their longer axes north and south, but there are many deviations and exceptions. The direction in which the monument points, and the position in which the remains of the dead were deposited, probably indicate the direction in which the spirit of the deceased is to travel to his new home. Conquerors and conquered

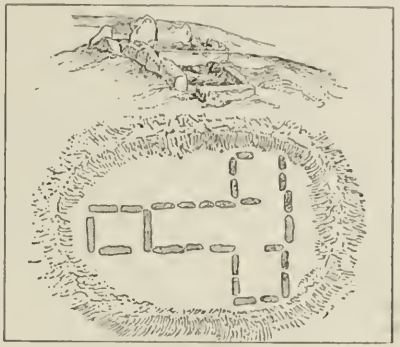

Fig. 71.

General view and Plan of T-shaped Grave, townland of Carrickard, county Sligo. The bearing of the longest axis is N. and S.

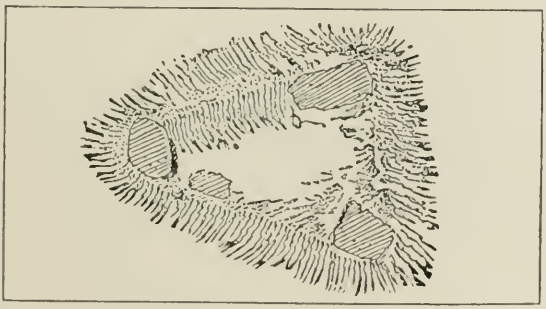

Fig. 72.—Triangular Grave, near the village of Highwood, county Sligo.

will also naturally have different spirit-lands to which their respective dead depart.

It is only comparatively recently that it has been authentically demonstrated that there are sub-aërial megalithic sepulchral structures shaped like a hammer or the letter T (fig. 71), as well as triangular graves (fig. 72), and others in plan (fig. 73) resembling a dumb-bell.

Fig. 73.

Ground Plan of Dumb-bell-shaped Rude Stone Monument near Clochan-na-stooka, island of Achill.

The covering over of cists and chambers with mounds, either of earth or stones, is a distinct advance in sepulchral architecture; and though some cromleacs may be of the same age as carns, it is open to question whether carns are as old as cromleacs. It is doubtful if the discovery of a metallic article has yet been made in a cromleac; but it is not for a moment to be inferred that therefore bronze was unknown to the cromleac builders. Bronze then was rare, and if discovered it would only occasionally be found in the case of some special ornament of the dead—perhaps a bronze pin which, it is supposed, was used to fasten the skin in which the bones were wrapped. The absence of bronze, or its presence in only very rare instances, rather strengthens the presumption as to the extreme antiquity of cromleacs, as well as the continuity of that form of sepulture. On the other hand, when carns or covered cists are opened for examination, it is found that ornaments and weapons of bronze are a by no means rare discovery. In one of the carns of the Loughcrew group, an admixture of stone, bronze, iron,

FIG. 74.

General view of cist found in a tumulus in the Phœnix Park, Dublin. Also shell necklace, bone fibula, and urn found with the human skeletons.

glass, and amber articles were discovered. Petrie appears to have looked upon carns as of a later date than cromleacs. He writes that in them 'the most beautiful bronze weapons are found.'

Some tumuli, however, present characteristics which apparently point to their erection being coeval with that of cromleacs. In the year 1838 workmen, when levelling a tumulus in the Phœnix Park, Dublin, discovered within the mound, but at the distance of several yards from the centre, a cist or covered chamber. It consisted of an oblong chamber, the longer axis north and south 5½ feet in length, 3½ feet wide, and 20 inches high (fig. 74). The sides were formed by seven flat stones placed on edge, upon which the covering flag rested; this latter was 6½ feet in length, 1 foot thick, and about 3½ feet in breadth. Within this chamber two perfect male skeletons were found, and also the tops of the femora of another, and a single bone of an animal supposed to be that of a dog. The heads of the skeletons rested to the north; and as the enclosure is not of sufficient extent to have permitted the bodies to lie at full length, they must have been bent at the vertebra and at the lower joints. The crania and skeletons would appear to have belonged to a very primitive race type; and only flint, bone, and shells, were found with the human remains, together with urns of rude design and coarse material. The objects found in the urns bear marks of fire; but the shells and fibula do not, any more than the skeletons, exhibit traces of its action.*

These carns or mounds are of various forms. A star-shaped example has been discovered by W. F. Wakeman.

* *Catalogue Museum R.I.A.*, pp. 180–183.

Dr. Joyce points to the fact that the word 'carn' forms the whole or the beginning of the names of about 300 townlands, in every one of which such a structure must have existed. There are many other names of townlands, of which it forms the middle or end of the word.

The chamber or cist is not always in the centre of the mound, and many interments have been apparently, at a later period, effected in the periphery of the pile. The central or principal chamber varies from the rudest cist, to chambers of some extent, as at New Grange, or to a complicated arrangement of cists in curious form. For example, the ground plan of a semi-denuded carn in the island of Achill appears to be a 'crux-ansata.' However, further exploration may add other cists to those already exposed, and change or modify the appearance of the present grouping.

The theory has been advanced that some carns are merely cenotaphs, and that in many of these monuments no interments ever took place. It is quite possible that there may be instances of this, for so late as the year 1840 the practice existed at Cong, in the county Galway, of erecting—in an open space outside the village—heaps of stones of various shapes and sizes, composed of scattered pieces of limestone, with which the surface of the country is strewn. These heaps are in memory of individuals buried in the precincts of the ancient abbey of Cong; after each burial the friends erected a pile of stones as a sort of cenotaph of the deceased.* In the barony of Coolavin, county Sligo, a carn was not long ago erected on the side of the high road by the country people, to commemorate the death of a rioter shot by the police.

* *Ulster Journal of Archæology*, vol. vii., p. 74.

Many other instances of the continuation of this ancient custom could be enumerated.

Attention has been already drawn to the frequent occurrence of secondary interments in the outer circumference of tumuli and carns; but many instances have been noticed of sepulchral urns, covering ashes, &c., being found deposited in the sides of natural dunes or sandhills along the coast. The destruction of the sod binding the sand together, has permitted the wind to uncover many of these singular interments.

Brugh-na-Boinne signifies 'the dwelling-place on the Boyne.' *Brugh* would, in English, assume the modern form of *Bro*, as is the case in some names of townlands. The field in which the mound of New Grange is situated is now called Bropark; and in the immediate vicinity are Bro Farm, Bro Mill, and Bro Cottage. Thus the name 'Brugh,' by which the place is called in the Senchas-na-Relec, still lingers around these monuments.*

It is immaterial for present purposes to inquire whether the ancient cemetery of *Brugh-na-Boinne* is or is not represented by the three great mounds of Knowth, New Grange, and Dowth, situated within view of each other on the banks of the river Boyne. But they deserve notice, not only for their magnitude, but also for the interior arrangements and sculpturing on the stones forming the chambers and passages.

Knowth is a steep mound, with a flattened top, rising from the side of a sloping hill; its base surrounded by traces of a circle composed of very large stones.

According to Edward Lhwyd, an antiquary of the seventeenth century, the entrance to the carn of New

* *Journal, Royal Society of Antiquaries of Ireland*, vol. ii., 5th series, p. 430.

Grange seems to have been re-discovered in or about the close of the century. Molyneux published an account of it in 1725; and other references to the mound will be found in the list of books and papers bearing on Irish prehistoric archæology which is given at the end of this volume. The carn is an enormous pile of small stones, occupying the summit of one of the hills commanding the river Boyne. Its greatest diameter is 280 feet, it is 400 paces in circumference, and is still 44 feet in height, although greatly lessened by having for a lengthened period been utilized as a quarry. It also had formerly been encompassed by a circle of immense boulders, placed at intervals of about 10 yards from each other. This mound contains a large chamber, formed of stones of great size, and to which access is had through a narrow passage, flanked and roofed with huge slabs. This passage has been open for at least two centuries. The entrance is nearly square, and underneath is a stone, carved in spirals and volutes. Another carved stone was found in the rubbish above the entrance. The passage runs nearly north and south, and is 63 feet in length; the average height about 6 feet, and its average breadth 3 feet.

The chamber is dome-roofed, nearly circular, with three off-sets or recesses, one opposite the entrance to the north, and one on each side, east and west, so that the ground-plan, including the passage, represents the figure of a cross. The great chamber is lined with eleven upright stones, partially sunk in the ground, and placed on edge, with their flat surfaces facing inwards. From the wall behind them springs the dome, composed of stones placed horizontally on the flat, with the edges presented towards the interior, and, by each layer projecting slightly within that placed beneath, they thus,

by decreasing the circle, form a dome without an arch, and the whole is closed at top by one large slab. The stability of the mass is preserved by the pressure of the surrounding material.

The top of the dome is about 20 feet from the floor; from the entrance, to the wall of the chamber opposite, 18 feet, and between the extremities of the recesses to right and left of the entrance, 27 feet. These are nearly square: that to the right is very much the largest, and the large oblong blocks forming it, present volutes, lozenges, zigzags, and spiral lines carved on the stone. A full description—with accompanying illustrations—of these curious devices is contained in Wilde's *Beauties of the Boyne and Blackwater*. A more detailed account by George Coffey, A.I.B., has lately been published in the *Transactions of the Royal Irish Academy*, vol. xxx. At New Grange, as in other similarly decorated sepulchres, the carvings are not only displayed on portions of the stones exposed to view, but also extend backwards into the surrounding mass, so that it is plain the decorations were incised prior to the blocks being placed in their present position.

In each recess off the central chamber there was an oval, slightly-hollowed stone basin. The one in the right-hand chamber, 3 feet long, was the most perfect, and differs from the others in having two slight indentations or *bullâns* cut upon its upper concavity, and it rested in another larger and shallower basin.

About a mile distant from this mound of New Grange is that of Dowth; a circle of large boulders—traces of which still remain—originally surrounded its base. It also has been freely used as a quarry, and in the gap on the western side, a passage somewhat similar to New Grange was observable, but was in such a ruined state

that it could not be traversed. About the year 1848 this passage was repaired, cleared, and the interior arrangement of the various chambers thoroughly examined. They, however, were not nearly so large as those at New Grange, although composed of stones of great magnitude.

A number of globular stones, about the size of grape-shot, and numerous fragments of human crania, were collected. Mixed with the clay and dust which had accumulated within the largest chamber were a quantity of human bones, in heaps as well as scattered, also unburned bones of horses, pigs, deer, birds, and fragments of the heads of oxen. Glass and amber beads, portions of jet bracelets, a curious stone button or fibula, bone and bronze pins, and knives and rings of iron, were brought to light.*

The carns of the New Grange group are some of the few prehistoric monuments to which an approximate date may be assigned. Ornamentation had there already commenced. The first germs of architecture are also plainly observable, so that their erection can be fixed from the standpoint of prehistoric archæology. The discovery of Roman coins outside the tumuli need not be taken into serious consideration when essaying to fix their date. They may have been deposited at any time from the period of their issue from the mint. A Roman coin—a brass of Gallienus—was found in the year 1867. A coin of Valentinian and one of Theodosius had previously been dug up in the same locality.†

In 1842 workmen found, within a few yards of the entrance to the souterrain of New Grange, at the depth

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* *Beauties of the Boyne and Blackwater*, pp. 184–209.

† *Journal R.H.A.A.I.*, vol. i., 3rd series, p. 50.

of two feet from the surface, five gold ornaments, a denarius of Geta, and two other defaced coins. The ornaments are figured in the *Archæologia*, vol. xxx., p. 136. They appear to belong to the Late Celtic Period.

The approximate date of the introduction of iron into the southern portion of Britain has been estimated by various authorities at from about two to three centuries B.C.—some writers leaning to an earlier, others to a later period. From this part its use spread slowly northward; but on the whole, it is probable that the knowledge of iron reached Ireland at a much later date directly from the Continent, and not through Britain; so that, allowing a considerable interval for an overlap, it is possible that iron had not advanced into universal use in Ireland, at the very earliest, much before the close of the fourth century of the Christian era, as will be essayed to be shown further on; it is impossible, however, to define any hard and fast line for the commencement of its use.* The transition from bronze to iron in a country of such extent as Ireland, divided into hostile populations, must have occupied a period which may be reckoned by centuries. Sir John Evans remarks that 'there must have been a time when in each district the new phase of civilization was being introduced, and the old conditions had not been entirely changed'; and of this intermediate stage

* The introduction of iron, according to W. Frazer, F.R.C.S.I., would seem to have 'occurred at a period within historic bounds for Ireland, and I believe long after it was well known on the Continent and in England. Some would assign a date of about 2000 years past for its introduction, yet it does not appear it can be fairly stated to have obtained absolute supremacy over bronze until the arrival of colonies of Danish settlers and of northern piratical fleets; let us say, at the earliest, in the sixth and seventh centuries.'

perhaps no better example could be produced than the evidence of the iron tools and ornamentation left by the tribe who erected the carns on the Loughcrew hills.

From these considerations, as well as from the style of decoration, Mr. George Coffey is inclined to date New Grange approximately about the first century of the Christian era; and 'if anything, would be disposed to reduce that limit rather than extend it,' Fergusson, in his 'Rude Stone Monuments,' conjectures its erection to have taken place towards the close of the third century, so that practically there is very little difference between the two estimates, and if we strike the happy mean and place its origin in the second century, we shall probably arrive at a sound conclusion. The ornamentation at New Grange and Dowth differs, but so does the decoration on the chambers of the Loughcrew hills. The exploration of Knowth, the third great tumulus on the Boyne, may throw more light on the subject; but it would appear to be probable that no very lengthened period separates Dowth from New Grange.

About two miles distant from the small town of Oldcastle, in the county Meath, lie the Loughcrew hills, of which the highest is called Sliabh-na-Calliaghe, or the 'Hag's Mountain.' By strange carelessness the large cluster of carns which crowns the summits of this range was unnoticed by the Ordnance Survey until W. F. Wakeman, and afterwards the late Mr. E. Conwell, directed attention to the omission, as well as to the important scribing which they contain.

The following is a brief description of the various designs on the walls of the passages (fig. 75) and chambers (fig. 76) in the Loughcrew carns:—

The ornamentation is apparently of three kinds:

Fig. 75.—General view of the remains of a passage in one of the Loughcrew Carns.

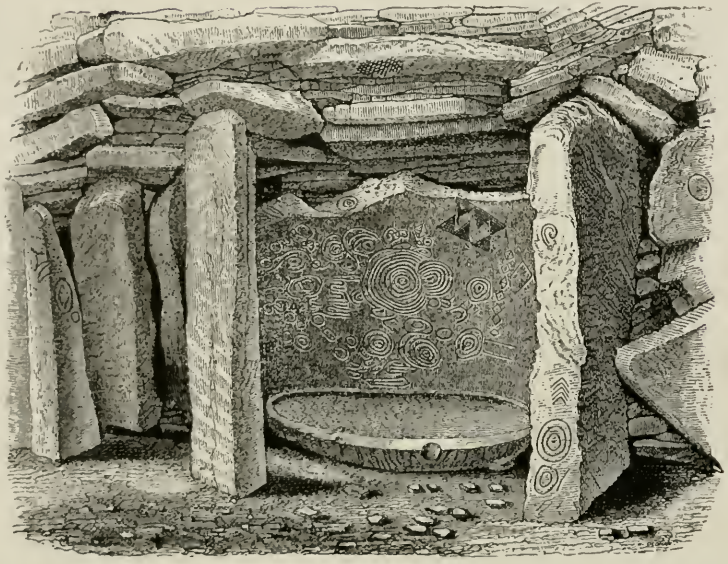


FIG. 76.

A Chamber in one of the Loughcrew Carns.

punched work, chiselled work, and scraped work, the first being the most common, the last very unusual; the carved stones exceed one hundred in number.

Fig. 77.—Stone C, Carn U. Boundary-stone between the recesses on south side of chamber, 4 feet 5 inches high, by 10 inches broad in widest part, of irregular shape, ending in a sharp apex. The drawing represents its eastern aspect.

In the cists long exposed to the destruction of the atmosphere, the carved work is often much obliterated; but in those lately opened the ornamentations are as fresh as at the hour they were executed.

The ornamentation was thus described by the late G. V. Du Noyer, M.R.I.A. :—Small circles, with or without a central dot (fig. 77); two or many more concentric circles; a small circle with a central dot surrounded by a spiral line; the single spiral; the double spiral, or two spirals starting from different centres; rows of small lozenges and ovals; stars of six to thirteen rays (fig. 78); wheels of nine rays; flower ornaments, sometimes enclosed in a circle or wide oval; wave-like lines; groups of lunet-shaped lines; pothooks; small squares attached to each other, side by side, so as to form a reticulated pattern; small attached concentric circles;

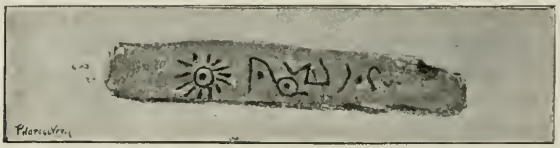


Fig. 78.—A loose Stone, obtained in excavating Carn F.

large and small hollows; a cup-hollow surrounded by one or more circles; lozenges crossed from angle to angle (these and the squares produced by scrapings); an ornament like the spine of a fish with the ribs attached, or the fibre-system of some leaf; short equi-armed crosses starting sometimes from a dot and small circle, a circle with rays round it, and the whole contained in a circle (fig. 79); a series of compressed semicircles like the letters ∩ ∩ ∩ ∩ inverted; vertical lines far apart, with ribs sloping downwards from them like twigs; an ornament like the fibre-system of a broad leaf with the stem attached; rude concentric circles with short rays extending from part of the outer one; an ornament very like the simple Greek fret, with dots in the centre of

the loops; fine zigzag lines, and two parallel lines, on each of which, and pointing towards each other, is a series of cones ornamented by lines radiating from the

Fig. 79.—Stone X, Carn T. Second stone of entrance-passage, south side. The wheel-shaped scribing on lower portion of surface measures 14 inches across.

apex crossed by others parallel to the base—this design has been produced by scraping; a semicircle with three or four straight lines proceeding from it, but not touching it; a dot with several lines radiating from

it (fig. 80); combinations of short straight lines arranged either at right angles to or sloping from a central line; an ᔓ-shaped curve, each loop enclosing concentric circles; and a vast number of other combinations of the circle, spiral, line, and dot which cannot be described in writing.

Fig. 81.—Stone D, Carn W. Appears to form one of the passage stones, 1 foot 7 inches high and about a foot wide. This ornament is repeated on early Christian head-stones to graves.

Whatever date may be assumed for the erection of the New Grange series of monuments, there can be little doubt but that the carns of the Loughcrew Range present us with an example of a much later period of erection. The scribings certainly constitute the most extensive and valuable collection of prehistoric decoration yet discovered in Ireland, perhaps in Europe. They apparently belong to the same—though an advanced—school of rude stone scribing, as is represented

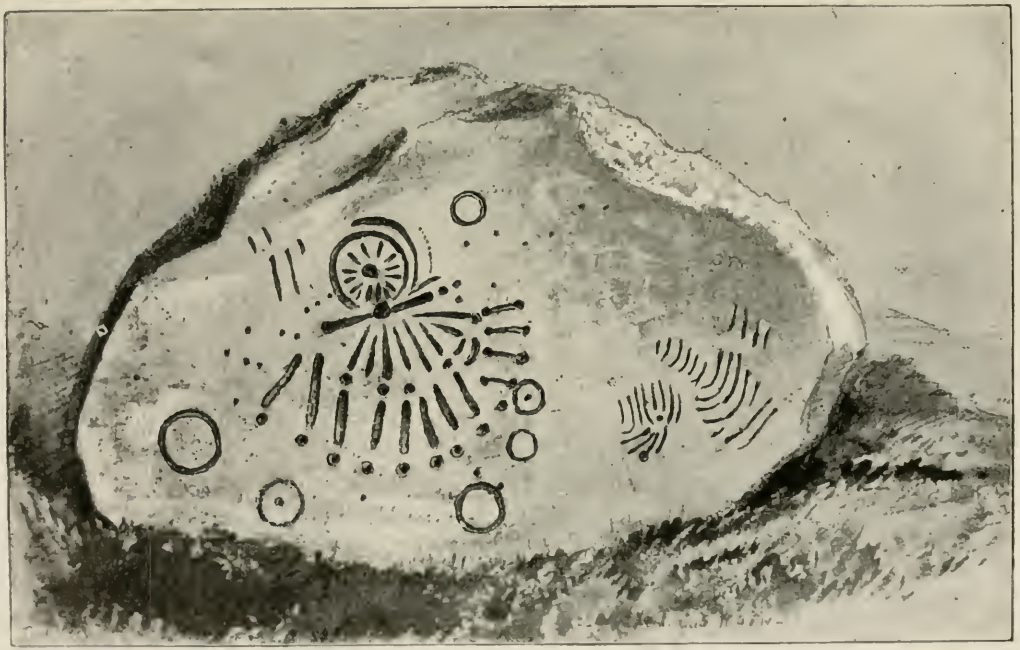


FIG. 80.

Stone A, situated 13 feet from the circumference of the most perfect or northern circle of the Loughcrew group of cairns. It is 5 feet 4 inches long, 3 feet 4 inches high, and 1 foot 2 inches thick.

by the New Grange group, as well as by the monuments of Brittany. Fig. 81 represents ornamentation commonly found on pagan monuments, and repeated on early Christian tombs; whilst the object sculptured on the upper portion of the slab, represented in fig. 77, bears a striking resemblance to the figure on the northern monuments, which Fergusson was of opinion was intended to represent a rude boat or ship. The discovery of iron in the New Grange carns, as well as the juxtaposition of gold ornaments and Roman coins, has been sought to be minimised; but in the Loughcrew group, besides flint and bone implements, bronze was also present, as well as jet, amber, glass, and numerous articles and implements of iron. Amongst these latter an iron punch.

In Connaught, the cemetery of Rathcroghan, known as *Relig na ree*, or the cemetery of the kings, lies on a lower level, to the south of the rath which gives name to the locality. It is a complete circle fenced in by a dry-stone wall, having two openings, of which the principal appears to have been flanked on the east by a mound which bears the designation of *cnocan na gcorp*. The diameter of the circular enclosure, 118 paces, gives an internal area of about two acres. Judging from the irregular elevations of the surface, it appears to have been divided into five portions. The interments all seem to have been in pits or chambers dug beneath the surface, and lined, in most cases, with rough walls of stone, covered by roofing flags, over which the sepulchral tumuli were erected. Several of these chambers lie open; the largest is about six feet by four feet. None of the stones exhibit tool-marks, or any sign of sculpture. The general impression is one of disappointment and

surprise at the mean accessories of a place supposed to be a royal cemetery.

On the slope of a carn near the town of Sligo (fig. 82) there are traces of a facing of stones, and about 12 feet nearer the summit there is another wall built with great exactness. It would thus appear as if the monument had been terraced; but it is now impossible to determine whether, in the original design, these terraces were observable, or if there had been a regular slope, as at

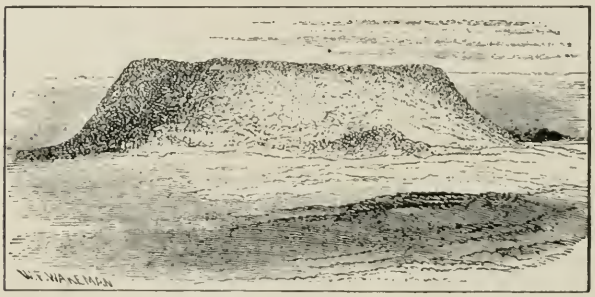


Fig. 82.—General view of Carn, on Carns Hill, near Sligo, looking east.

present. A Cornish antiquary arrived at the conclusion —which in the Sligo example is also apparently self-evident—that the carn had been raised or added to, either as part of the original design, or at different periods; that the interior wall marked the former exterior of the primitive place of sepulture, and that each subsequent circumvallation was an addition to the original nucleus.

The original entrances to the central or principal chambers in carns would appear to have been in most instances carefully concealed, and the discovery of the passage leading into the interior is generally the result

FIG. 83.

General view of Carn on the summit of Knocknarea, near Sligo, commonly called 'Misgaun Meaw, or Queen Medb's Misgaun. Small ruined sepulchral circle of stones in foreground. From Welch's Irish Views.

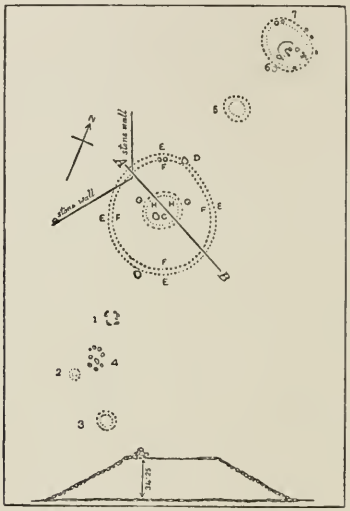
of mere accident; but a most unique feature in all the carns of magnitude on the Loughcrew hills is 'that the entrances to the interior are distinctly marked by a curving inwards of the basement circle of large stones.'

On the Hill of Knocknarea, near the town of Sligo, a carn was described in 1779, as an enormous heap of small stones, in figure oval, its circumference 650 feet at the base; on the one side a slope of 79 feet and on the other of 67 feet; the area on the top 100 feet in its longest diameter, and 85 feet in its shortest. It is at present about 590 feet in circumference; its longest diameter on the top 80 feet, its shortest 75 feet, and it is 34.25 feet in height. This huge pile is called 'Misgaun Meaw' by the country people, and according to tradition it is reputed to be the tomb of the great Queen Medb (fig 83). It is alleged that Medb has found her way into English fairyland under the designation of Queen Mab; Ben Jonson, Herrick, and Shakespeare introduce her into their poetry. Her acts are blazoned in the Irish tract, the Táin-Bo-Cuailnge, in the wildest style of poetical exaggeration, and she is vividly remembered in the traditions of the mountainous parts of Ireland. Many places are called after her; but she never seems to have been a popular Irish heroine; and, from the stories told of her by the Irish *shannachies*, 'she appears to have been regarded rather as a quean than a queen.'

Around the base of Medb's Carn on Knocknarea lie numerous megalithic, as well as microlithic monuments, which form a rude alignment, pointing nearly due north and south (fig. 84); these have all been opened many years ago, and human remains, and several rude ornaments and implements of stone were found; but

unfortunately no detailed description was given of any of them.

On an elevated ridge, about four miles south-east of Armagh, stood the 'Vicar's Carn.' It originally con-



A B.—Section of carn.
C.—Small carn erected by the Ordnance Survey Staff.
D.—Site of probable cist.
E E E E.—Original circumference of carn, about 660 feet.
F F F F.—Present circumference of carn, about 590 feet.
G G.—Diameter, 80 feet.
H H.—Diameter, about 60 feet.

Fig. 84.—Plan showing general distribution of the various monuments on the summit of Knocknarea. Scale of map $\frac{1}{2400}$. Scale of section $\frac{1}{600}$.

sisted of a mass of stones of small size, 132 feet in diameter. In 1799 it was surrounded by a circle of upright stones, planted in the earth and each about 6 feet in length, enclosing the entire structure, but this circle

has completely disappeared. Mr. Bell, who tunnelled into the carn in the year 1815, found only a small passage which had been formed along the bottom of the tumulus.

The later period to which the erection of carns may be relegated is evidenced by the fact of the comparative frequency with which bronze, and sometimes iron, weapons have been found in them.

These structures are still erected amongst primitive tribes. Some inland races of negroes form large carns over graves. These are increased by passing relatives, or members of the tribe, who continually add stones to the heap.

The frequency with which ancient churches were built in the immediate vicinity of sepulchral carns or tumuli is very remarkable. Our early missionaries may have thus erected their edifices in consideration of the prejudices of their converts who entertained a certain religious respect for these places as the graves of their ancestors.

Besides rude stone sepulchral monuments, the primitive inhabitants of Ireland have left behind them structures which are a combination of stone and earthen materials. There is the simple earthen barrow, or tumulus, varying in details (fig. 85); the more complex chambered-barrow, with or without a surrounding circle or circles of stones; and the ringed, platformed, and chambered-barrow, surrounded by one or more fosses and circles of stones. These barrows closely resemble the remains of raths, so that it is often impossible, without careful examination, to be certain of their sepulchral character. The description of the opening of a barrow at Topping, near Larne, county Antrim, may be taken as typical of the smaller class. Except a slight and gradual rise of

4 or 5 feet above the surrounding level, the general appearance of the ground showed little indication of the existence of a 'barrow'; the approximate diameter was about thirty feet. Labourers, when making a footpath through the centre of the elevation, came upon upright stones, forming the walls of a cist. The floor was composed of slabs of basalt; it was about ten feet in length by four feet in width, and it lay north and south. The cist was on the south end of this pavement, on which a

Fig. 85.—Earthen Tumulus, near the village of Highwood, county Sligo.

large urn was deposited in an inverted position; the workmen, imagining they had found a crock full of gold, broke it in pieces. When restored it measured twelve inches and a-half across the lip; it was made of roughly baked clay, the ornamentation being rudely linear, with an angular zigzag band. The cist was formed of a circle of six slabs placed on edge, and the top was closed in by a single flagstone. There was an outer cist, square in form, the vertical walls of which first attracted the workmen's attention. At the south end of the pavement was a large terminal stone, and at a

distance of nine feet, to the east side, were fragments of what proved to be from seven to eight small urns, with the bones and ashes which they had covered. In the clay were found a small blue glass bead, several flint implements, and a fossil, probably used as a charm or ornament, together with bones of oxen, the long bones having been split for extraction of the marrow.

:: *Keels*, *Killeens*, *Caltraghs*, and *Calluraghs* are ancient burial-places originally quite unconnected with Christian remains or associations, and, where still made use of, it is, as a rule, solely for the interment of unbaptized children, suicides, and unknown strangers. The Keel, and its other *aliases*, appears to be the pagan cemetery that was abandoned after the reception of Christianity, though still held in some degree of reverence by the peasantry, and to this feeling must be attributed the preservation of such vast numbers as are even still to be found throughout the kingdom. As a rule there is no fence around them, such as might be supposed would surround the last resting-place of the dead; no enclosing wall is considered needful, perhaps on the principle that those inside cannot get out, and those outside do not want to get in!

In an old manuscript entitled *Senchas na Relec*, or a History of the Cemeteries of Pagan Ireland—copied at Clonmacnoise about the beginning of the eleventh century from a more ancient document—the most celebrated burying-places of the chiefs of Erin are enumerated, but of the names by which they were designated, the situations of only two have been identified with any certainty, namely, Croghan, in the county Roscommon, and Brugh, supposed to be New Grange, upon the river Boyne, not far from the town of Drogheda, both previously described.

The varieties of form observable in the outline of megalithic or earthen monuments may, perhaps, be viewed as signs of race or tribal distinctions. The greatest jealousy and excitement are, up to the present day, aroused by suspicion of any encroachment of one family on the supposed boundary of the burying-ground appropriated to another family; so that in the early ages distinctive outlines must have been essential, in order to preserve the claim either of septs or individuals, and it is remarkable that in some counties the characteristic features of the megaliths vary according to districts. We do not take kindly to the idea of our remains being disturbed in their last resting-place; even great minds are not above feeling this dread. On Shakespeare's tomb are, it is stated, graven the following lines, which denounce the disturber of his repose, and were written, it is alleged, by the bard himself:—

> 'Blest be the man who spares these stones,
> And curst be he who moves my bones.'

Travellers in Asia, as well as in Africa, narrate that private property owned by individuals is frequently marked with the cross, circle, or some such symbol or combination of symbols, the article being thus 'tabooed,' and this protects them from 'the evil eye,' or from being coveted by other people. It is not improbable that the varieties of form observable in the outline of Irish monuments were emblematic of their deities, were tribal 'totems,' that by which, through its use, protection was invoked; and such may have been the origin of the custom that prevailed during the earliest age of the Christian Church, for nations, families, or individuals, to select as guardian some special saint or holy person to watch over and defend

them. It is almost needless to state that the many cruciform-shaped megalithic monuments is no sign of the Christian origin of the structure. The cross is one of the simplest forms in ornamentation, one that is suggested equally to the primitive, or to the most highly-cultured mind, for it is merely the intersection of two straight lines. The wide dissemination of the figure of the cross throughout many widely-separated countries, and at a period long anterior to the promulgation of Christianity, has been a subject of much speculation, and the fruitful origin of many theories.

To judge from recorded discoveries and investigations of cromleacs and other sub-aërial structures, the objects deposited with human remains belong to a population in a very rude, but certainly not in an utterly savage state of society. Weapons, tools, ornaments of flint and stone, and the same articles reproduced in bone, horn, and cetaceous material, are the prominent articles turned up by explorers. Sometimes, however, the most incongruous 'finds' are discovered, in juxtaposition, in ancient sepulchres—perhaps the effect of accident. In the tumulus of Dowth, plundered by the Danes of Dublin in the ninth century, these marauders, it is alleged, left behind them an iron knife-blade and a bronze pin ; a Danish spear-head of iron was found in a cromleac near Boho, county Fermanagh ; for the northern invaders ransacked most of the pre-Christian, as well as the Christian monuments, and would not have been probably so systematic in their explorations had they not, in many instances, been rewarded by the discovery of buried treasure. As a general rule, calcined remains found in the rude stone monuments are burned imperfectly, short of incineration ; they are porous, light, very fragile, and charcoal is present in more or

less quantity. In a few instances, and under exceptional circumstances, the osseous remains have become impregnated with calcium carbonate, which effects a great change. The bones become compact, extremely heavy, and hard as stone—in fact petrified. In old Pagan interments, phosphate of iron or vivianite is frequently found in organic matter in decay. Most of the calcined interments in Carrowmore gave evidence of traces of this matter which varied in shade from cobalt to prussian blue; after exposure to atmospheric influence it changed to green, and then to black.

The series of monuments now to be described were formerly, by some antiquaries, regarded as of sepulchral, or Druidical origin, but of this, it is thought, there is little or no proof.

Rude monoliths, or pillar-stones, though found in Great Britain and on the Continent, are not very numerous in Ireland; but their deficiency in numbers is, to some extent, counter-balanced by the multifarious theories which have been originated regarding the purposes of their erection. They are by some antiquaries supposed to be idols, lithic monuments in commemoration of the death of some renowned warrior, or they were erected on the spot where some celebrated combat or battle took place; in support of this theory it is stated that, in Scotland, they are styled 'cat stones,' derived from *cath*, i.e. 'a battle.' There is a stone monument called the Cat's Stone in the county Westmeath. Also it is possible they may have been employed for the more prosaic but useful purpose of landmarks.

In many localities a conspicuous standing-stone placed in a prominent position, either by the hand of nature or that of man, so as at a distance somewhat to resemble the human figure, is called by the Irish-

speaking peasantry 'far-breaga,' a false man; and O'Curry gave an extract from an Irish tale, in which a Druid transforms three of his enemies into rocks.

In the south of Cork, at Keimaneigh, there is a pillar-stone which bears, in the imagination of the peasantry, a rude resemblance to a female figure. The natives of the locality suppose this to represent a woman, who, for her misdeeds, had been petrified by a magician. This legend is especially interesting, as the magician was, in this instance, according to popular tradition, an Irish saint. The rock contains five *bullâns*, each with an oval-shaped stone in the cavity; the stones are regarded as petrified 'meskins' of butter. St. Fiachna (who lived in the sixth century), finding the woman cheating, after a chase overtook her, and transformed the culprit into a *dallan*, or pillar-stone.*

Crofton Croker recounts a legend of human beings metamorphosed by magic into stones, and in the townland of Scurmore, parish of Castleconnor, county Sligo, there are some large boulders, bearing the singular title of 'Children of the Mermaid'; to them is attached a legend which accounts for their origin.

The following was recounted by a countryman, a native of Kilross, county Sligo. Long ago there lived a celebrated magician who possessed a cow that brought wealth and prosperity to her owner. One of his neighbours, with the assistance of his son, succeeded in driving it off for the purpose of stealing it. The magician, soon discovering his loss, pursued and overtook the thieves. In his hand he bore his magical wand, and, overcome with passion, struck with it the cow as well as the thief, thereby metamorphosing them all into stone. In the centre stands the thief,

* *Journal R.H.A.A.I.*, vol. iii., 4th ser., p. 460: W. F. Wakeman.

represented by a pillar-stone more than 6 feet high ; near him is the boy, of lesser proportions ; and another slab lying prostrate represents the cow.

Many years ago the island of Inishbofin was unknown, being rendered invisible by enchantment ; but one day two fishermen, in a currach, were lost in a dense fog, and drifted on to a rock on which they landed and lighted a fire ; but no sooner had the flame touched the rock than the fog suddenly lifted, and the fishermen found themselves on the solid land of Inishbofin, which has ever since remained. On one side of the shingly beach on which the discoverers found themselves was the ocean ; on the other a fresh-water lake. Close to them they perceived a hag or witch driving a white cow into the lake, and as it entered the water she struck it with a wand that was in her hand, when it at once turned into a rock. One of the fishermen, angry at what he saw, struck the old witch, and at once both he and the hag were transformed into stone. All three are still to be seen !

Formerly when any great event was about to happen, the cow used to emerge from the lake, and walk round the island, but a long period has now elapsed since she was last seen. From this magical cow the island takes its name *Inisbofinne*.*

The witch or goddess Calliagh Vera possessed a celebrated bull called Conraidh. One day it strayed away from its pasturage, and swam across a creek, which Vera jumped over. She was so enraged that she struck the animal with her Druid's rod, and turned it into stone. The bull-shaped rock is to be seen near Mainin to this very day ! †

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* *Proceedings Royal Irish Acad.*, vol. iii., 3rd series, p. 360.

† *The Vision of MacConglinne*, pp. 133, 134, Kuno Meyer.

According to Cormac's *Glossary* the Fé, or magical wand, was made of aspen, an unlucky tree, and the wand was of such a purely pagan character that, in Christian times, it could be kept only in 'the cemeteries of the heathen.' It had sometimes symbols in ogham cut upon it, and a baleful effect was supposed to have been wrought by striking with it whatever was an object of detestation to the striker. This is a clear explanation of the wands described as carried by 'hags,' 'witches,' and 'magicians' in present day popular folk-lore, and it takes us back to times when Paganism still subsisted in Ireland.

A wand, formed of different material, appears to have been also used for healing purposes, for in a medical MS. of the year 1509, it is recommended as a cure for a man rendered impotent by magic, to cut the patient's name in ogham on an elm wand, and to therewith strike the sufferer.*

Pillar-stones inscribed with oghamic scores were generally employed to commemorate the death of some personage of importance; and it is noteworthy that although the ogham symbols are incised with flint or metallic implements, yet, with this exception, the surface remained in its natural condition. In ancient Irish MS. tales and legends, it is frequently mentioned that ogham was employed to record names on these pillar-stones, in most instances the formula being almost of a stereotyped character as follows:—'His grave was dug, his funeral games were celebrated, his ogham name was inscribed on a pillar-stone erected over his grave.'†

* *Hermathena*, vol. iii., pp. 228, 229.

† Examples of these notices are given in an article by the Bishop of Limerick (Rt. Rev. Dr. Graves) in *Hermathena*, vol iii., p. 217.

A few of them bear 'cup and circle' markings, and others oghamic scorings; whilst some have been pressed into the service of Christianity by having punched on them a rude cross or some symbol of the Christian faith; the majority, however, of these pillar-stones are devoid of all ornamentation. Some of these standing-stones were formerly used by the peasantry for purposes of divination. In the townland of Farranglogh, county Meath, are two remarkable pillar-stones, from whence the locality derives its name, these are called 'the speaking-stones,' and were formerly consulted in cases where either man or beast had been 'overlooked' by the 'good people.' At these shrines it was forbidden to ask the same question twice, and this condition having been broken by some unbelieving or forgetful inquirers, the 'speaking-stones' have since become voiceless! They had formerly been infallible in breaking the spells of the fairies, in curing the effects of the 'evil eye,' and they named with unerring accuracy the individual or individuals by whom malicious acts were perpetrated. Were cattle or other valuables stolen or lost, the directions given by the stones were certain to lead to the recovery of the missing property, but, alas! evil-disposed persons may now act with impunity—the stones are dumb!

Near Castle Kirk, not far from Lough Corrib, behind the rock that shelters the church and glebe from the north, a spring pours into a natural rock basin. Close by lay an oval-shaped flagstone called 'St. Fechin's stone'—'the "touchstone" and terror to all evildoers for miles around; for whoever was accused or suspected of a crime was either "dared to the *Leac-na-Fechin*," or voluntarily underwent the ordeal of turning the flag with certain rites and incantations.' There was a

guardian of the stone who instructed postulants in the mysteries of the procedure.*

There can be but little doubt that Clogher, in the county Tyrone, like many other places in Ireland, anciently possessed some remarkable stone, gifted by the credulous with linguistic powers. According to legend a hero of antiquity, Conor Mac Nessa, consulted the oracle at Clogher. He was told to proceed to the Isle of Man, and there get a noted *Ceard* or artificer to make for him a sword, spear, and shield, and the supernatural power possessed by them would be instrumental in gaining him the sovereignty of Ulster. Needless to add that the prediction of the oracle proved true. In pre-Christian times on the Continent, statues supposed to be gifted with human voices were not uncommon!

A magical stone at Altagore, county Antrim, is styled *Shanven*, i.e. 'the old woman'; its owner kept it in his garden, and food was always left on it for the 'Grogan,' so are fairies designated in the North of Ireland. The food consisted of butter and oatmeal cakes: this, it is needless to say, disappeared during the night. A mason once took this stone, not knowing it to be enchanted, and built it into a gate pier; next morning, however, it was found back in its original position.†

Holed-stones, which may, in some instances, be regarded as pillar-stones, are frequently found in Ireland; they occur also in Scotland, England, and France, and from thence can be traced to India. In *Asiatic Researches* it is stated that, in this latter country, the perforations, when large enough, are used by devotees as a means of

* *Lough Corrib, its Shores and Islands.* Sir William R. Wilde, 2nd edition, pp. 268, 269.

† *Journal R.H.A.A.I.*, vol. ix., 4th series, p. 63.

forgiveness of sins, or for regeneration. If the hole is large enough, the suppliant creeps through; but if it be small, the hand alone is passed through.

The original purpose for which the large apertures were utilised seems to have been a literal as well as a symbolic means whereby an ailment, disease, or sin might be left behind, or got rid of, also as a symbol by which a compact could be ratified, or an oath taken, by a well-known and public act. The postulants, at first, probably crawled through the orifice; then when it, through change in custom, became diminished in size, they probably passed a hand, or, if a compact was to be made, clasped hands through it. The act of a bride passing her finger through her wedding-ring may be but a survival of the ceremony when the woman would have had to crawl through an aperture in a sacred stone, and in one place in England this observance, it is stated, still occasionally occurs, *i. e.* at 'St. Wilfred's Needle,' in the crypt of Ripon Minster.

In the graveyard of Kilchouslan, on the northern shore of Campbelltown Bay, Kintyre, there was a flat, circular-shaped stone. The centre was pierced with a hole large enough to permit of the hand being passed through. According to tradition if a couple who had eloped joined hands through this aperture, they were regarded as lawfully married, and beyond pursuit.

Near St. Madron's Well in Cornwall, there is a block of granite called the 'creeping-stone,' pierced in the centre by a hole; through this aperture sickly children were formerly passed in the belief that the ceremony would effect a cure; and there are two holed-stones at Bolleit in the same county. They are figured in the *Gentleman's Magazine* for the year 1864. One was then employed for the utilitarian purpose of a gate-post.

There was a third holed-stone not far distant. The apertures in these average but six inches in diameter.

In the parish of Fyvie, in Aberdeenshire, close to St. Paul's Well, there was a large stone supported on two others, thus leaving a space between it and the ground. Through this space ailing children were passed in the belief that the sickness from which they were suffering would be thereby removed.

It is stated that in some rural districts in England a usage still exists which appears like a survival of this custom, a sapling being employed instead of the aperture in a stone. When a child is taken ill, it is brought before sunrise by a 'wise woman' to where a young ash-sapling grows. The child is undressed, the sapling is split towards its centre, the severed portions being held far enough asunder to allow the infant to be passed through by the 'wise woman,' while certain mysterious words are pronounced. The cut in the sapling is then carefully bound together, and plastered over with mud or clay. If the tree lives the child will certainly recover, but if it dies the disease from which the child suffers will prove incurable.

At Minchen Hampton, in Gloucestershire, there is a holed-stone called the 'Long-stone.' At its lower end is a perforation, through which children used to be passed for cure or prevention of measles, whooping-cough, and other infantile ailments.

Near Kirkwall, Orkney, at a place called Stennis, is a large pillar-stone with a hole through it. The site on which it stands was deemed a place consecrated to the meeting of lovers, and when they joined hands through the stone, the pledge of love and truth then given was held sacred. In his tale of *The Pirate*, the stone-circle of Stennis is specially mentioned by Sir

Walter Scott, who was himself an antiquary as well as a novelist. The oath to the old Scandinavian gods was sworn by persons joining hands through the hole in this stone, and the ceremony was held sacred even amongst modern Christians.

An inscribed stone, bearing upon it a Latin, and a more recent Arabic, inscription, is situated at Chila, near Rabat, in northern Africa. It acts as a sort of confessional stone, and is supposed to possess miraculous powers. Women who seek to obtain forgiveness of their sins place their hands in the hole which is in the centre of the stone.

A custom which prevailed at Ardmore, county Waterford, greatly resembles the eastern rite; in this instance, however, there was no aperture in the stone, the passage being underneath—namely, between it and the rock upon which it rests. The 'Cloch-Nave-Deglane' lies amongst the boulders on the strand at Ardmore, and it used to be the centre of great attraction on St. Declan's patron day. The pilgrims, after performing their 'rounds,' squeezed themselves through under it three times. This stone is noted for several cures, especially for pains in the back; it is a belief that no one with borrowed or stolen clothes can pass unharmed under it. Near Durrow there is a singularly marked limestone flag, also famous for curing 'pains in the back.'*

Another famous stone at Ardmore has been buried, probably for the purpose of putting an end to its attendant ceremonies, as it must be classed among those relics connected with rites of days long gone by. It was called the 'Cloch-Daha'—stated to signify 'the Stone of Daghdha.' It was about 2 feet long by 18

* *Journal R.H.A.A.I.*, vol. i., (4th series), p. 28.

inches in breadth and same in depth, hollowed into an oval trough-like shape, probably an old Pagan 'rock basin'! Its centre was pierced by a hole, in which, on Ash Wednesday, the young unmarried men of the village inserted a wattle, on the top of which they tied a quantity of tow. They then brought with them all the unmarried maidens they could muster from the village and vicinity, and made them dance round the Cloch-Daha, holding the pendent tow, and spinning it whilst dancing. The ceremony terminated by the young men dragging the maidens through the village seated on logs of wood.*

At the foot of the round tower near Inniskeen, a small village in the county Monaghan, there was a large stone of porphyry with a hole in the centre, large enough to thrust the arm through. It was once used for superstitious purposes; in more modern times a pole was placed in the hole, up which the country folk used to climb at Easter for prizes.

A most remarkable stone, which was undoubtedly, in olden time, used for the carrying out of some Pagan rite, marks the point of junction of the three parishes of the district formerly, and still by the country people designated Cuilirra, near the town of Sligo. It is a thin limestone flag set on edge; it measures 10 feet in breadth by 9 feet in height above ground; the little stream which issues from Tobernavean, *i.e.* the 'Well of the Warriors,' laves its base. Towards the east side, the flagstone is pierced by an oblong perforation, 3 feet in length by 2 feet in breadth. From its mottled appearance this slab is called the 'speckled,' also the 'grey stone' (fig. 86).

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* *Journal Kilkenny Archæological Society*, vol. 1, new series, pp. 43, 44.

In memorials of the 'holed-stone' class in Ireland, the earliest perforations appear to have been the largest; and they gradually dwindled down from the foregoing examples to such as would little more than admit a finger. In connexion with ecclesiastical buildings, instances occur in localities widely apart. Cross-inscribed holed-stones may, probably, have been so

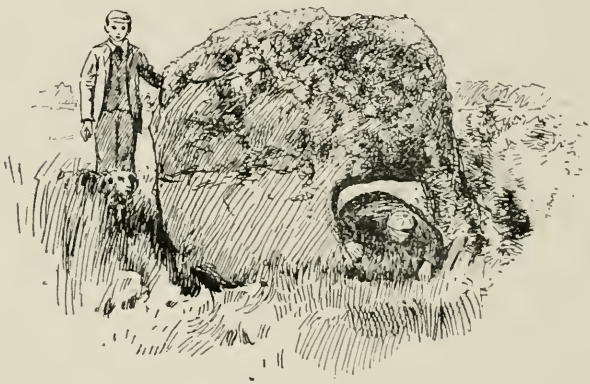

Fig. 86.—Holed-stone, called Cloch-bhreac, or Cloch-lia, at Tobernavean, near Sligo.

sculptured by the earliest missionaries amongst the Irish with the object of thus diverting the prayers of the Pagans into supposed Christian channels.

About a mile from the village of Doagh, county Antrim, stands a large slab called the 'Holed-Stone.' It is upwards of 5 feet in height above ground, about 3 feet from which there is a round hole perforated through it, sufficient to admit an ordinary-sized hand. It is said that, not long ago, a large stone, with a hole through it, stood on a hill near Cushendall in the

same county. There is a stone of this class in the churchyard of Castledermot; there is another near the church of Kilmalkedar, about a mile from Smerwick Harbour, county Kerry. On Aran Island, there is a perforated stone inscribed with a curiously-shaped cross. O'Donovan states that there were superstitious rites held in connexion with it, but he does not specify their nature. There are holed-stones also at Killbary on the Shannon, at Devenish in Lough Erne, and at Innismurray off the Sligo coast. The two holed-stones on this island are styled by the natives 'praying-stones.' The perforations are not similar to any elsewhere described as occurring in Ireland. One face of the slab is perforated near the edge by two holes of a size sufficient to admit only the insertion of a thumb; and the orifices extend through the stone, and open out at the sides into apertures cut to receive the fingers of the hand. One pillar-stone stands on the southern side of the 'Church of the Men,' and the other near the 'Church of the Women.' Both monuments are cross-inscribed: one of them on its western, the other on its eastern face. Near the pillar-stone, at the 'Church of the Men,' is a second slab, but unperforated. Women about to add to the number of the inhabitants of the island offer up prayers for their safe recovery before these two 'perforated stones'; by placing their fingers in the side and their thumbs in the front holes, they are enabled to rise with more ease from their kneeling position. The prayers thus offered up appear to be efficacious, no deaths taking place on the island from such a cause.

Rude boulders, placed in parallel lines, extending from a few yards to even miles in length, have been found in Great Britain and on the Continent. These arrangements of stones have been variously styled

alignments, avenues, and a variety of learned names. No alignments, it is thought, have as yet been discovered in Ireland. One antiquary found distinct traces of several in the county Sligo, extending for a considerable distance; unfortunately, however, for this theory, the country people recollected the demolition of stone fences in the locality, and it was the traces of their original foundations that represented the supposed Druidical alignments. It must be said, however, that W. F. Wakeman has claimed to have discovered alignments of stones at Cavancarragh in the county Fermanagh.

Some curiously shaped masses of rock have been named by antiquaries 'Druids' Chairs,'* 'Brehons' Chairs,' and 'Inauguration Chairs,' according as it was imagined that they had been used by the Druids when giving instruction, by the Brehons when laying down the law, or by chiefs when being installed in office. A good example of this latter class is a chair-like block of common whin-stone—seemingly a freak of nature—for it is evidently unchiselled; the seat is lower than that of an ordinary chair; the back, however, being more high and narrow. This chair was stated to have been, during a long period, the seat on which the O'Neills of Castlereagh, near Belfast, were inaugurated. It is now used as a garden seat by a gentleman of antiquarian tastes in the county Sligo.

Facing northward, and set about four feet inwards from the circumference of one of the largest and most conspicuous carns which crown the summits of

* A short distance from the road leading from Killiney to Bray, near the Martello Tower, stands a so-called 'Druids' Judgment Seat.' A drawing of it is given in *The Dublin Penny Journal*, 1834, and in *Archæologia Hibernica*.

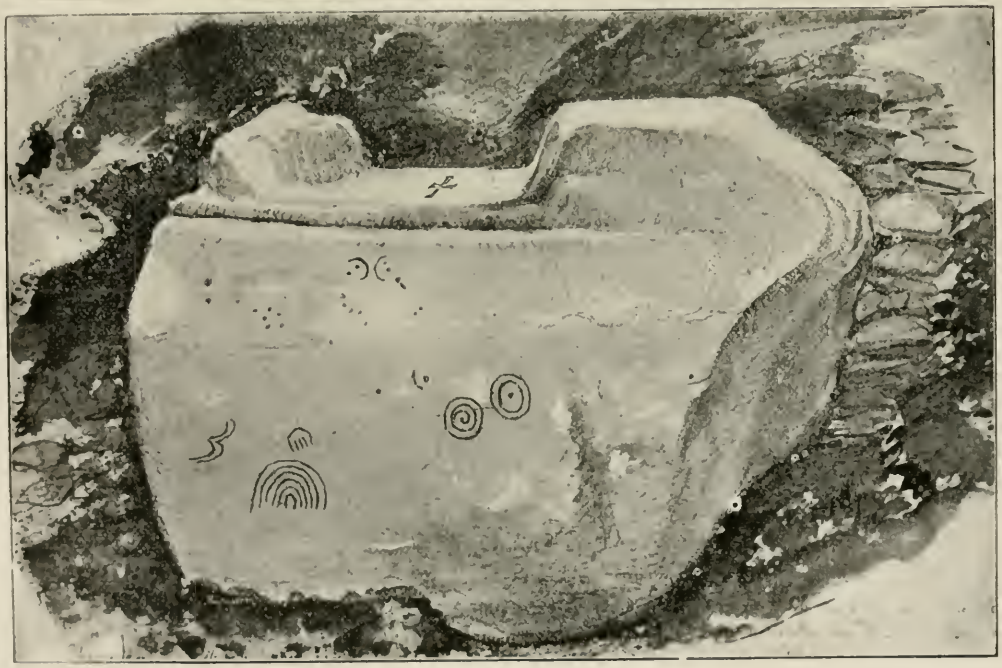

FIG. 87.

The Hag's Chair, Loughcrew group of Carns, showing ornamentation.

the Loughcrew hills, there is a huge boulder, weighing about ten tons, and popularly called 'The Hag's Chair,' from a celebrated sorceress or hag of ancient days. The legend current in the neighbourhood is to the effect that 'she came one time from the North to perform a magical feat in the neighbourhood, by which she was to obtain great power, if she succeeded. She took an apron full of stones, and dropped a carn on Carnbane ; from this she jumped to the summit of Slieve-na-cally, a mile distant, and dropped a second carn there : from thence she made a jump, and dropped a carn on another hill about a mile distant. If she could make another leap, and drop the fourth carn, it appears the magical feat would be accomplished ; but in giving the jump she slipped, fell, and broke her neck.' She was buried in the neighbourhood ; but local tradition does not account for the 'Chair' being called after her. This immense block of stone is ten feet long, six feet high, and two feet thick ; it has a rude seat hollowed out of the centre. The ends are elevated nine inches above the seat, and the back has fallen away by a natural fracture of the stone. The cross carved upon the seat of this chair, however, as well as others which will be found on the upright marginal stones, were cut, for trigonometrical purposes, by the men engaged in the survey of the country ; but the seat bears traces of real pagan ornamentation, notably zigzags and concentric circles (fig. 87). In front of, and round the base of the chair, considerable quantities of quartz, broken into small lumps, were strewn about.

Whatever they may have been used for, these 'seats' were certainly not employed as inauguration chairs, for legend and history both inform us that Irish chiefs were installed in office by being placed on mere undressed

flag-stones, on which, however, the impression of two feet were sometimes observable. Spenser alludes to the custom, and also to the mode of election of chiefs and tanists.

Ancient as well as modern beliefs are impregnated with this idea of supernatural markings made by the hands or feet of either gods or supernatural beings. We have the gigantic footprints on Adam's Peak in Ceylon, and the stone at Jerusalem, on which are to be seen the impressions of the fingers of the angel Gabriel!

The best example of this class of object is the *Lia Fail*, or Stone of Destiny, which it is recounted that the race of the Tuatha de Danann brought with them to Ireland. It was held in the highest veneration, and on it the ancient monarchs of Ireland were inaugurated. This supposed magic-stone, which roared like a lion when a legitimate king stood on it, was, it is alleged, sent to Scotland in the ninth century, in order to secure the then dynasty on the throne, an ancient Irish distich having induced the belief that the Scotic race should rule, only so long as the magic stone was in their possession:—

> 'If Fates' decrees be not announced in vain,
> Where'er this stone is kept the Scots shall reign.'

It was preserved with the greatest care at Scone, in Perth. On it the monarchs of Scotland were crowned till the year 1296, when Edward, King of England, having overrun Scotland, carried off from the Cathedral of Scone, as a trophy of victory, this Stone of Destiny, which he placed under the coronation chair, where it still remains in Westminster Abbey, and on it all our monarchs have since been crowned. It appears to have

been first advanced by Petrie, whose lead has been followed by a host of other writers on Irish antiquities, that a large pillar-stone, standing on one of the mounds at Tara, is the real *Lia Fail*, or Stone of Destiny. This monolith does not, however, occupy its original position. In 1798 it was removed from its former site on 'The mound of the Hostages' to mark the trench, into which were thrown some peasants who had fallen in a skirmish with the troops. The Irish kings would have had a very uncomfortable seat if perched on top of this pillar. Irish and Scotch accounts, however, show great want of agreement as to the history of the 'Stone of Destiny.'

Rocking-stones—although by some antiquaries considered as evidences of Druidical worship—may be looked upon as natural phenomena, which can be explained by a course of denudation. The boulder after having been dropped into its present position by the action of ice, the subsequent agency of water would suffice to account for the gradual removal of the earth originally surrounding these stones; on pretty much the same principle that the surrounding ice having been melted away by the action of the sun, rocking-stones are seen on the surface of glaciers. The ice which is covered by the stone is, to a great extent, protected from the influence of the rays of the sun, and does not melt to any considerable extent, whilst the general surrounding level of the glacier sinks and the stone remains eventually balanced on the summit of a pedestal of ice. A good exemplification of the denudation theory of the origin of the rocking of stones is afforded by a boulder in the townland of Carrickard, county Sligo, where on the slope of a hill there is a so-called rocking-stone—for sometimes it rocks and sometimes it is immovable.

This stiffness occurs after heavy rains, when clay is washed down the slope and rests in the socket in the rock on which the boulder is balanced. Not far from this stone, near the village of Highwood, there is another rocking-stone very easily swayed from side to side (fig. 88). It is to be particularly noted that these phenomena appear to occur in groups, and also seem to be more frequent in some geological formations than in others.

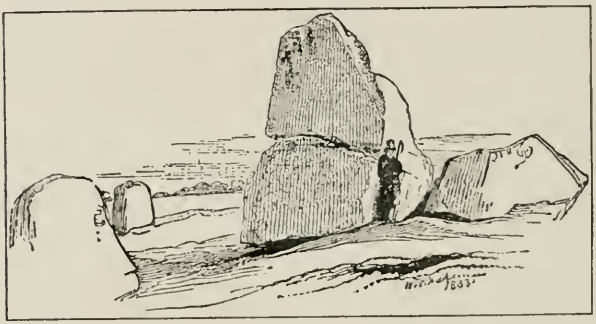

Fig. 88.—Rocking-stone, near the village of Highwood, county Sligo.

A notice of one of these curious phenomena occurs in *The Dublin Penny Journal* for 1833:—

'On the southern shore of Brown's Bay, Island Magee, county Antrim, near high-water mark, is a large stone supposed to weigh ten or twelve tons, commonly called the "rocking-stone," from its being slightly tremulous when pressed by the hand. From this circumstance it is supposed by some to have been a "logan," or rocking-stone, formerly used as an agent in the superstitious rites of the Druids and their mystical interpretations.'

Rocking-stones have been found in almost every country in Europe, and also in several parts of America.

These freaks of Nature's handiwork are, in Ireland, by no means rare. In Irish Carricknabuggadda, or Cloghnabuggadda, signifies the 'Rocking-stone' (fig. 89); in the North of Ireland they are styled 'Shugling' and 'Logan Stones.'

Rocking-stones are mentioned by Pliny, who thus describes one: 'Near Haspasus, a city of Asia, there is a huge rock, which is easily moved with one finger, but it remains immovable if a man push against it with all his strength.' In good examples a slight push produces an oscillation, not fitful or irregular, but like the beating of a pendulum, and in proportion to the force applied.

Fig. 89.—Carricknabuggadda, or the Rocking-stone, near Wellmount Lodge, Cloonacool, county Sligo.

CHAPTER VIII.

FICTILIA AND STONE URNS.

STUDYING the processes employed in or near our own time, and comparing similar conditions of modern civilization, the arts of a primitive people might be easily illustrated. In the ceramic remains found in ancient sepulchres it is noticeable that the clay is mixed with pounded shells or grit of various kinds, in order to give hardness to the pottery; and, in the following description, written about the middle of the 18th century, a minute account is given of the method employed by the Indian tribes of Louisiana in making earthenware. Indeed, we might almost imagine a scene was depicted from ancient Irish life:—'After having amassed the proper kind of clay, and carefully cleaned it, the Indian women take shells, which they pound and reduce to a fine powder. They mix this powder with the clay, and, having poured some water on the mass, they knead it with their hands and feet, and make it into a paste, of which they form rolls 6 or 7 feet long, and of a thickness suitable to their purpose. If they intend to fashion a plate or a vase they take hold on one of these rolls by the end, and fixing there, with the thumb of the left hand, the centre of the vessel they are about to make, they turn the roll with astonishing quickness round this centre, describing a spiral line. Now and then they dip their fingers into water, and smooth with their right hand the inner and

outer surface of the vase they intend to fashion, which would become ruffled or undulated without that manipulation. In this manner they make all sorts of earthen vessels—plates, dishes, bowls, pots, and jars—some of which hold from forty to fifty pints. The burning of this pottery does not cause them much trouble. Having dried it in the shade, they kindle a large fire, and when they have a sufficient quantity of embers they clean a place in the middle, where they deposit these vessels, and cover them with charcoal. Thus they bake their earthenware.' Many of the fictile vessels discovered amongst the *débris* of Indian kilns, opposite St. Louis, resemble Irish fictilia, more especially those found in lake-dwellings and kitchen-middens; whilst one fragment showed punctured and impressed ornamentation of the type often found on Irish urns, to which its texture also bore a strong resemblance, having been composed of clay, with a mixture of pulverized granite. The Indians also wove baskets of rushes or willows, similar in shape to the vessels they intended to make. Having coated the inside of these baskets with the proper clay, they were then baked, when the moulds, being of course destroyed by the operation, left on the outer surface of the vessels the impression of the basket-work patterns. Some of Captain Beechey's officers (*Voyage*, p. 385) were supplied in California with 'water brought to them in baskets, which the Indians weave so close that when wet they become excellent substitutes for bowls.'*

* The following account of the mode of making and baking pottery in New Guinea illustrates the manner in which the fictile vessels of our Neolithic Period may have been produced :—'The process of manufacture is simple. On a piece of board is placed a mass of moistened clay. The woman, equipped only with a smooth stone, which she holds in the left hand, and a light bat-shaped piece of

The art of making wickerwork was often successfully practised at a very early period of civilization. Not long after the conquest of Britain by the Romans the ornamental wickerwork of the natives was highly prized at Rome. Now, on Irish fictilia, depressed lines occasionally occur, dotted with pierced knobs at intervals. These knobs were probably used to keep in place the twisted rush or thong, which was pressed into the soft clay to form the sunken line, and afterwards, the cord being burned away in the firing, the knobs served as ornament, and also gave a firmer hold in handling the vessel.

A quantity of pottery, in a very fractured condition, has been found in 'kitchen-middens,' or the refuse-heaps in connexion with Irish lake-dwellings. Facilities are thus afforded for comparing ordinary domestic vessels of a probably later date, with urns and vases of an undoubtedly prehistoric and Pagan period.

The inhabitants of the lake-dwellings had in use a description of fictile ware distinctly characteristic in style, graceful in form, and well manufactured, but though the great majority of specimens of this pottery present designs similar in character to ornamentation observable on the walls of sepulchral chambers, on the face of natural rocks, on cinerary fictilia, or on gold or bronze ornaments, yet, in richness of design and of

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wood, some fifteen inches long, in the right, squats in front of the clay, and taking from it a lump, beats it with the bat on the stone till it becomes concave. Occasionally dipping the bat into water, and sprinkling the clay to keep up the proper degree of moisture, she gradually fashions the pot. It is certainly remarkable that the sizes and shapes of the different classes of pots turned out by this rough process can be so exactly maintained as they are. The newly-fashioned pots are taken to a fire of small logs and burnt, and while hot are sprinkled with a reddish liquor, which colours them.'—*Journal R.H.A.A.I.*, vol. vi., 4th series, p. 484.

FIG. 90.

Restorations of earthenware vessels from the sites of Lake-dwellings.
After drawings by W. F. Wakeman.

detail, they do not rival, and indeed fall into comparative insignificance when compared with, some ornate patterns on the finest specimens of cinerary urns. However, although abundant, the household pottery of the lake-dwellers has, as yet, not presented an entire ancient specimen. The fragments appear all to have been hand-made, whilst the action of fire would seem, strange to say, to have been greater on the interior than on the exterior. Judging from attempts at restoration of some examples, they were larger than cinerary fictilia, and were also broader at the base. They were provided with handles, for suspension over the fire, and with lids, or flat discs, formed of the same kind of clay. For escape of steam during the process of boiling, a simple provision is observable, in the form of a small circular hole pierced through the neck of the vessel, just below the point where the lid would be supported.

The fictile vessel represented by No. 1, figure 90, presents, in a restored form, one of the finest of the crocks found on the crannog site of Ballydoolough, county Fermanagh. In colour it is a light yellowish-red; it measures 3 feet 2 inches round the mouth, and is ornamented on the rim and sides. This decoration has been evidently impressed upon the soft clay before the vessel was burnt, and the pattern is the same as may be observed on cinerary urns.

No. 2, figure 90, is also a restored representation of a large fragment of fictile ware, discovered on one of the crannogs in the lake of Drumgay, county Fermanagh; it is about 1 foot in height, by 9 inches in breadth.

Nos. 3 and 4, figure 90, are two vessels from the crannog of Lough Eyes, county Fermanagh. With the remains of these vessels there were numerous flat discs

formed of the same kind of clay, and they would seem to be their covers or lids.

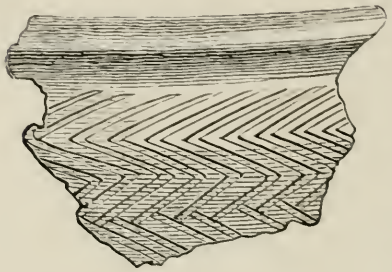


Fig. 91.

Fragment of Fictile Ware, from a Lake-Dwelling in Lough Eyes, county Fermanagh. (Half-size.)

Figures 91 and 92 are fragments of fictile ware from lake-dwellings.

Pottery found on the sites of seashore settlements is of at least two kinds, one of them being identical with, though inferior to, that of burial urns; the other more thick, coarse, and, as a rule, undecorated. Remains of vessels of this latter class are apparently divisible into two distinct types approximating somewhat in outline to the shape-divisions in cinerary fictilia.

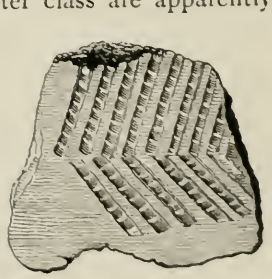


Fig. 92.

Fragment of Fictile Ware, from a Lake-Dwelling at Drumskimly, county Fermanagh. (Half-size.)

The earthen vessel, figure 93 (*a*), was discovered by Mr. W. J. Knowles, lying in pieces, on the site of a primitive seashore settlement in Whitepark Bay, Co. Antrim. The various fragments were, it is stated, all recovered. It is 10½ inches broad at top, 6 inches broad at bottom, and nearly 11 inches high; (*b*) was found by the Rev. Leonard Hassé at Dundrum Bay, county Down, almost perfect. It has been restored by him, and is figured in the *Journal*, R.S.A., Ireland.

Figures 94 (*a*), (*b*), represent specimens of household or culinary fictilia, from raths or cashels: (*a*) is a restoration of an earthenware vessel, found by Mr. R. J. Ussher in the kitchen midden of a rath at Bewly, near Waterford. It stood about 12 inches in height. Fig. 94 (*b*) represents a vessel, portions of which were discovered by Mr. William F. Wakeman within a cashel, or cahir, known as Cahircrin, near Craughwell, county Galway. It probably stood about 14 inches in height, and is decorated like some of the pottery found in lake-dwellings, especially of fragments from Lough Eyes, in the county of Fermanagh. It is evident from the foregoing examples that the fictilia from crannogs, seashore settlements, raths, and cashels, are almost identical.

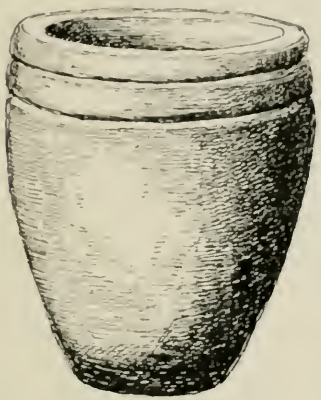


Fig. 93 (*a*).

Fig. 93 (*b*).

Fig. 93 (*a*) and (*b*).—Restorations of Earthenware Vessels, from the Sites of Seashore Settlements. From Drawings by W. F. Wakeman.

The fictilia found in Pagan sepulchres, carns, and

tumuli have yet to be classified, so that a distinction may be drawn between the different kinds of vessels: some being intended for the reception of human ashes, though this class is usually found in an inverted position; others are of a size too diminutive for such uses, and to those the rather unmeaning designations of 'food vessels' and of 'incense cups' have been given. 'Food vessels,' as the name implies, were at one time supposed, by antiquarians, to be utensils deposited with the dead, and containing food necessary for the sustenance of the departed during his long journey to the land of spirits. 'Incense cups' were regarded as employed in burning incense; but is it likely that this was known or used in the Neolithic, or even early Bronze Period? It has also been suggested that they served as 'chafers' for 'conveying fire within a small quantity of glowing embers or some inflammable substance, in which the

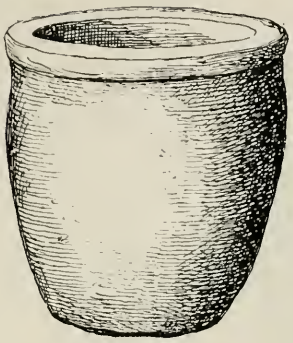


Fig. 94 (*a*).

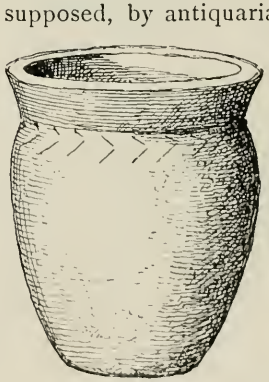


Fig. 94 (*b*).

Figs. 94 (*a*) and (*b*).—Restorations of Earthenware Vessels, from the Sites of Raths and Cashels. From Drawings by W. F. Wakeman.

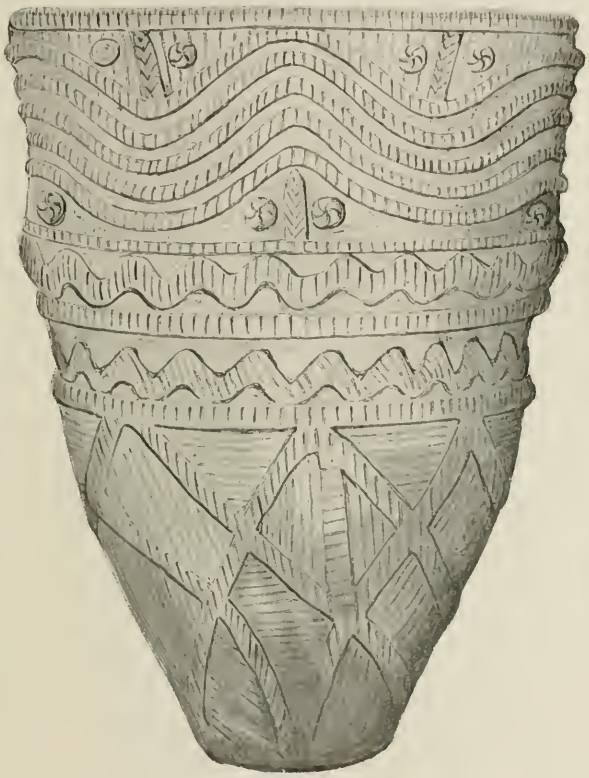


Fig. 95.

Lofty type of Cinerary Urn, found in a Mound near Glenville, and now in the Belfast Museum.

(From a Drawing by W. F. Wakeman.)

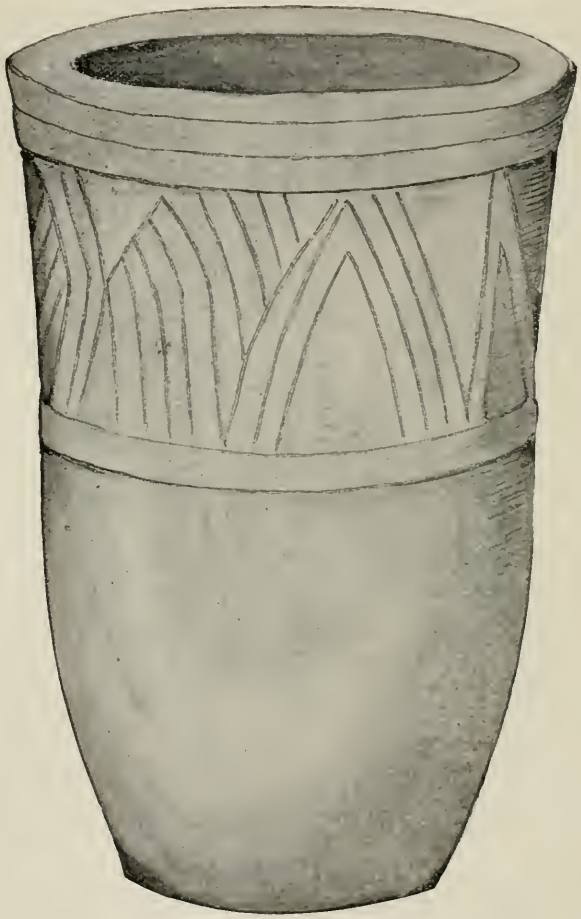


Fig. 96.
Lofty type of Cinerary Urn, found in a Carn near Hillsborough, county Down.
(From a Drawing by W. F. Wakeman.)

latent spark might for awhile be retained.' They are often found in company with large cinerary urns; but as the purpose for which they were intended has not yet been ascertained, perhaps the term 'secondary' cinerary fictilia might be considered more appropriate than the various fanciful names by which the smaller class of vessels are at present designated.

A cinerary urn, usually so styled, is vase-shaped, the base narrow, and gradually swelling upwards until it attains its greatest breadth, which varies in degree, but is generally at about three-quarters of its height, then it again contracts to the mouth, which is often provided with an overhanging lip. In many instances the sides extend outwards in a straight line until the greatest breadth is attained. The distinguishing feature of this class of fictilia is that the height exceeds the breadth, whilst in 'secondary' cinerary fictilia the breadth exceeds the height. Despite this division, it is difficult, if not impossible, with the knowledge we now possess, to classify mortuary fictilia in proper order, or to determine the age to which they belong.

'The skill displayed in the construction of the material,' remarks Sir William Wilde, 'or in the formation of the patterns worked upon it, is not of itself sufficient to warrant us in assigning to these fictile vessels comparative ages, any more than the remains of earthen materials, from the rudest pottery to the finest porcelain of the present day, could afford the inquirer some centuries hence a means for chronologically classifying the pottery of the nineteenth century.'

The large urn, represented by figure 95, may be regarded as a typical example of the lofty type of cinerary fictilia, being 25 inches in height. Its sides and base

consist of a core of gritty material, very dark in colour, and baked to almost stony hardness. Over this, both within and without, was spread a coating of fine matter, yellowish-red in colour. The ornamental bands and discs are laid on in separate pieces, and the whole must then have been again subjected to the action of fire.

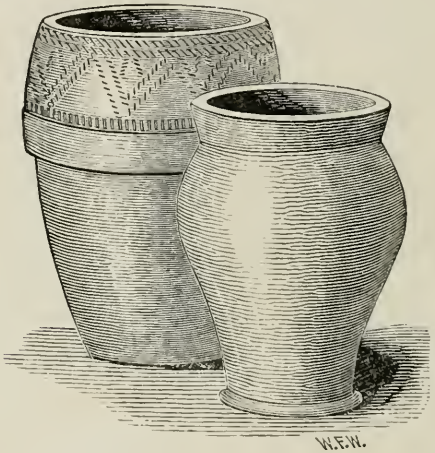


Fig. 97.—Lofty type of Cinerary Urns, found near Dundrum, county Down. From Drawings by W. F. Wakeman.

This beautiful specimen, formerly in the Glenny collection, was found in a mound near Glenville; it was subsequently purchased by the late Canon Grainger, and is now in the Belfast Museum.

The tall urn (fig. 96), though plain in character, is of graceful shape; like the preceding vessel, it is formed of a strong, coarse core, enveloped in fine material, also yellowish-red in colour. It is from a carn near Hillsborough, county Down; it is 10 inches high, 6 inches across the rim, and $3\frac{1}{2}$ inches in the base.

Figure 97 represents two cinerary urns, sole survivors of a batch of ten, found in the year 1858 by workmen near Dundrum, county Down. The larger of the two had, round the mouth, a rich ornamental border, about

Fig. 98.—Lofty type of Cinerary Urn, from Carrowmore, county Sligo.

$2\frac{3}{4}$ inches deep, evidently made by the pressure of a cord upon the clay when in a soft state, the marks of the fibre composing it being retained by the material; the smaller urn was the only vessel found face upwards.

A large and decorated urn (fig. 98), or rather upper portion of it, was found in one of the Carrowmore rude stone monuments (No. 17). The diameter of the vessel

at its mouth is 14 inches; its original height must be, to some extent, matter of conjecture, the lower extremity being a restoration. The neck and upper portions are divided, by a narrow raised band, into two members, each of which is decorated with a chevron or wavy

Fig. 99.—Lofty type of Cinerary Urn, from a Tumulus at Rathbarron, county Sligo.

pattern, and a number of raised circular bosses, as shown in the engraving. Its manner of manufacture appears to be similar to that described in the formation of figure 95.

An urn of graceful form (fig. 99), and enriched about the middle with five raised bands, more or less ornamented with chevrons and wavy oblique lines, was

Fig. 100.

Intermediate type of Cinerary Urn, a connecting-link between the lofty type of Cinerary Fictilia and the 'Secondary' Class. From county Down.

Fig. 101.

'Secondary' type of Cinerary Urn, from Ballymote, county Sligo.

found in a tumulus at Rathbarron, near Coolaney, county Sligo. The interior of the neck is enriched by a fillet of straight lines; the base is plain; in colour it is a light greyish drab. The vessel contained calcined bones and a small mica-slate disc.

Figure 100, now in the Museum, R.I.A., is of graceful shape, and like the tall vessels, already noticed, is formed of coarse gritty matter; it is drab-coloured, and exhibits a style of decoration very common on objects of its class found in Ireland. In shape it forms a connecting-link between the lofty cinerary urns and the broader vessels, supposed to be food-holders, &c. It was found in the county Down, although the precise locality has not been recorded; in height it is about $4\frac{3}{4}$ inches; greatest breadth the same; across mouth also $4\frac{3}{4}$ inches.

Figure 101 represents the best preserved specimen of a number of urns, found in the year 1827, near Ballymote, county Sligo. It is a vessel of the secondary type, $5\frac{3}{4}$ inches in height, slightly more across the mouth, and light drab in colour. The neck displays what may be considered as either a chevron or lozenge design, resembling ornamentation seen upon the stones of Newgrange.

Figure 102 is a vessel unusually globular in form, roughly ornamented with an indented pattern, consisting of six rows of punch marks. It is formed, as usual, of a dark, gritty core, over which, on both sides, has been spread a fine yellowish or buff-coloured material. In appearance it approaches to the culinary class of crannog or seaside settlement fictilia. Its height is $3\frac{1}{2}$ inches; across mouth, $4\frac{1}{2}$ inches; greatest breadth, $5\frac{1}{2}$ inches. It was found at Donagore, four miles from Antrim.

Figure 103 is a vessel from a cist in the townland of Barnashrahy, near Sligo, and strictly belongs to the class designated 'food-vessels.' It is highly decorated, hard-burned, and light red in colour; the colour is uniform throughout, internally and externally, showing no special traces of fire inside. In height it measures 4 inches, and across the mouth 6 inches.

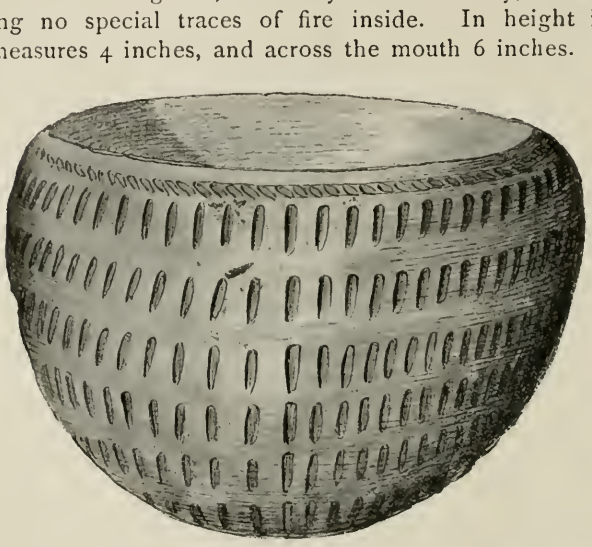


Fig. 102.—'Secondary' type of Cinerary Urn, from Donagore, county Antrim.

Figure 104 was discovered in a cist in the Co. Sligo, and bears a great resemblance to a vessel found on the summit of the Hill of Tallaght, near Dublin. It presents a great variety of designs, decorated bands, chevrons, dots, and lines; it is about 4 inches high, $5\frac{5}{8}$ wide, and $4\frac{3}{8}$ across the mouth. It is partially encrusted with carbonate of lime, possibly the drippings of stalactites, a material which has very often preserved cinerary urns.

The body of this vase (fig. 105) may be described as divided into numerous compartments and fillets, which

Fig 103.—'Secondary' type of Cinerary Urn, from Barnashrahy, near Sligo.

Fig. 104.—'Secondary' type of Cinerary Urn, from county Sligo.

are adorned alternately by chevrons, or curvilinear details, clearly and sharply executed. The base of the

urn is also very artistically decorated. This vessel, dark brownish-grey in colour, $3\frac{5}{8}$ inches in height, and

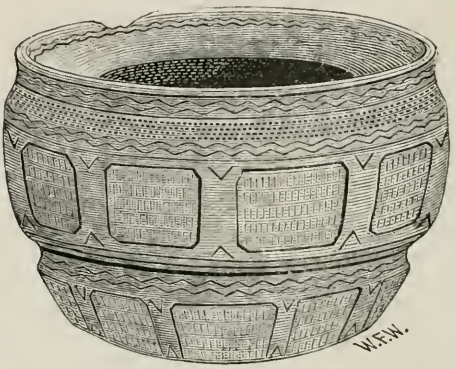


Fig. 105.—'Secondary' type of Cinerary Urn, from Carrickbanagher, county Sligo.

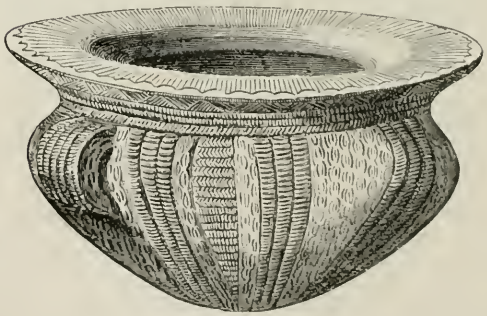


Fig. 106.—'Secondary' type of Cinerary Urn, from Bagnalstown, county Carlow.

$5\frac{1}{4}$ inches across the mouth, was found in a cist in the townland of Carrickbanagher, county Sligo.

Perhaps the most beautiful vessel which has as yet been found in Ireland is that shown in figure 106. It has been described by the late Sir William Wilde in the Catalogue of the R.I.A. It is $2\frac{1}{8}$ inches in height, and $3\frac{3}{8}$ inches across the margin of the lip. In the year 1847 it was discovered in a cist laid bare by the formation of a railway cutting near Bagnalstown, county Carlow. It was contained within a very rude and larger urn, both being filled with fragments of human bones. It is light brown in colour, except where encrusted, like figure 104, with carbonate of lime. It is peculiar in being provided with a handle. The same writer remarks that, 'when reversed, the bowl presents, in shape and ornamentation, all the characteristics of the Echinus, so strongly marked, that one is led to believe the artist took the shell of that animal for his model.'

The decoration on an urn is not always alike in detail; and in some places the pattern is more rudely executed than in others. 'The lines in triangles, squares, and such like, although having a somewhat similar appearance, are often very unequal in numbers and they are differently placed, as if the operator filled in the spaces with lines after no special pattern. In the more conspicuous portions there are also varieties in detail: some circles and curves being smaller than others, as if the surface had been badly spaced, and some of the figures had to be made smaller to get them in, while the scores, making up adjoining circles, curves, and lines, will not be equal in number; other discrepancies might be pointed out. The material in the sides of the urns, as in rude pottery of the present day, is not of equal thickness. To this appears to be due the want of symmetry in many of these, as, while

drying, the thick and heavier parts appear to have weighed down, and made the vessels more or less lop-sided.'*

In adjoining sepulchral chambers, nay, even in the same cist, the fictilia may present totally distinct characteristics: the one may be rude and ill-finished; the other well formed, well baked, and beautifully ornamented. In fact the only way of determining the comparative ages of sepulchral fictilia is by carefully investigating the circumstances under which they are discovered, and the description of cist or monument in which they had been deposited, as well as noting the 'grave-goods' which accompanied the interment. Whilst in carns, bronze is by no means an uncommon find, together even with iron, yet in all monuments, except carns, the articles are of a rude description, and generally non-metallic. There is nothing extraordinary in the discovery of bronze in some sepulchres for that metal must have been in use towards the close of the period when cremation and urn-burial was practised. Then bronze being rare, it would be only occasionally found in the case of, perhaps, some special ornament or weapon of the dead being deposited with its owner in his last resting-place.

Some archæologists hold that all ornamental pottery was made exclusively for sepulchral use, but abundance of ornamental domestic pottery has been discovered on the sites of lake-dwellings in Ireland. Although some pottery was undoubtedly fabricated for mortuary purposes, it is also apparent that vessels employed for ordinary domestic purposes were often deposited in the

* *Journal R. H. A. A. I.*, vol. v., 4th series, pp. 759, 760: G. H. Kinahan.

grave for the use of the dead in their long journey to their spirit home.

Near several localities, in which urns were discovered, there was evidence that the manufacture of this description of fictilia had been carried on; hearths, materials, and fragments of baked clay were brought to light; yet, despite this, it is difficult to decide authoritatively as to the manner in which the majority of the urns were manufactured. Assuming that most of the vessels were constructed at, or near, the funeral pyre, the moulder used the clay procurable in the vicinity; hence, perhaps, the great variety in the composition and colour of funeral fictilia. In some of the rudest specimens, which are always the most fragile, the material is a coarse clay, with scarcely any admixture of sand; but in those which show a higher degree of skill in the makers, sand and small fragments of stone, evidently in some instances deliberately broken for the purpose, are mixed through the clay, and also rubbed in, perhaps to assist in drying, as well as in giving stability, upon the inner surface, especially near the base. 'A micaceous clay appears here to answer the same end; but in some of the very fine specimens minute particles of quartz and felspar may be observed coating the interior, which, from the sharpness of their fracture, would appear to have been broken specially for the purpose. . . . In colour, Irish urns differ considerably upon the outer and inner surfaces. The latter is almost invariably blackish, or dark-brown, the result of partial torrefication, and perhaps from the heated bones and charcoal placed within them, either when soft or after they had been sun-baked; this colour generally passes through four-fifths of the mass. The outer surface is either a light-red grey or brown; the first is most usual, and appears

to be the result of the atmosphere, which was, however, excluded from the interior by the mass of the contents of the urn; the colour of the exterior usually passes for some distance within the lip. The drab or clay-coloured urns bear little mark of fire, either within or without; the brown belong only to the thinnest and hardest description of pottery.'

Thus it will be seen that, according to Wilde, and indeed almost all other writers on the subject, the majority of urns exhibit, in their interior, traces of having been subjected to intense heat, as if the vessels had been filled with glowing charcoal; whilst the outer surface would appear to have been generally either merely sun-dried, or subjected to very slight heat.

W. F. Wakeman is of opinion that, in very many cases, there are three distinctly-indicated stages in the process of their manufacture:—'The vessel appears to have been fashioned of a somewhat coarse and gritty material; it was then baked in a strong fire, and burnt almost to blackness. It would seem, upon cooling, to have been overlaid with a fine matter, generally buff or cream-coloured, and sufficiently soft to readily receive impressions from a tool formed of wood, horn, bone, stone, or possibly bronze or iron. Strips of light material, like that of the coating or veneer already referred to, were then laid on, just, to use a homely illustration, as a modern cook will embellish a pie-crust. The overlayings, while still soft, were then indented with patterns, and the work either dried in the sun, or presented to the influence of a moderate degree of heat from a fire of wood or peat.'*

The ornamentation on cinerary fictilia presents great

* *Archæologia Hibernica*, pp. 300, 301.

diversity of designs; the rudest appears to have consisted in a number of dots and oblique indentations made with the point of a stick or other similar instrument, and without any regularity, all over the outer surface of the vessel.

There are urns which have raised, hoop-like marks, or ridges; others, on the contrary, display circular indented lines, scratched into the soft clay, and generally dividing the vessel into an upper and lower section. Finally, there is the class decorated with upright horizontal, chevron or zigzag lines; between these, circular indentations are displayed in some of the better formed urns; many of these lines have a pectinated appearance, and it is to be remarked that though zig zag ornamentation is frequently observable on the most primitive urns, no trace has, it is believed, as yet been noticed of the spiral decoration characteristic of the ornamentation of some of the oldest sepulchral monuments of Ireland.

Sometimes, simple scratches with the point of a sharp tool form a portion, if not the entire, of the ornamentation; a herring-bone decoration, produced by a number of short lines passing obliquely from either side of a real or imaginary line, is not uncommon.

Indentations seemingly made with the top of the finger, others, bearing all the appearance of having been made with the point of a flint or metallic tool; rope-like markings, either sunken or in relief, together with embossed patterns, may be noticed, and they were all apparently executed upon the plastic clay.

Wilde drew attention to one example in which the decoration appears to have been effected by some sharp-cutting tool after the vessel had been sun-dried to a degree of excessive hardness. This specimen—

composed of sandy clay, sprinkled with minute particles of quartz and mica—is a good example of the high and vase-shaped urn, contracted at the mouth and base. The chevron band round the middle, as well as the dotted marks and circular lines, all appear to have been cut out with a sharp tool after the clay had hardened, and they are therefore of a much lighter colour than the rest of the surface. Some urns are tooled over on the inside of the lip.

A great quantity of cinerary fictilia, containing incinerated bones of human beings, as well as of animals, have been found throughout Ireland. Urns have been discovered in the most unlooked-for places; one discovery occurred 'on the site of a long-used dung-hill, which had been scraped rather more deeply than usual.' Until lately the majority of these funeral relics of the past were broken into fragments by the irate discoverers —irate for this reason: it was, and still is, in some parts of the country, a popular belief amongst the peasantry, that the bones contained in the vessels were in reality golden treasure, belonging to the 'good people' or fairies, and that if watched through the night, with proper precautions and ceremonies, the fairy gold at daybreak would still remain gold, and not bear the outward appearance of mere rubbish. On failure of the incantation, the disappointment of the finder generally found expression in the fracture of the vase, and the scattering of its contents.

This superstition is of undoubted Eastern origin. In Mr. Bliss's description of the excavations carried on by the 'Palestine Exploration Fund,' on the mound of Tell-el-Hesy, supposed to be the site of the ancient city of Lackish, he recounts how he was waited on by a deputation from the workmen, consisting of Arabs

and Fellahin, and begged not to, any further, bewitch the 'tell,' or hill. 'You come to a tell that is full of gold and treasure, and bewitch them into the form of potsherds. Then you dig out the potsherds, take them to your own country, undo the spell, and they turn back to gold and treasure.'

Belief in buried treasures is also universal throughout Ireland. T. Crofton Croker, in *Collectanea Antiqua*, gives an amusing account of having, in the year 1814, come upon nearly a hundred peasants at work on the side of a hill called 'Castle Treasure,' so named from pieces of wrought gold having, from time to time, been found there. The exertions of the gang, employed in uprooting and turning over the rocks and boulders with which the surface of the ground was covered, were under supervision of a tall female wrapped in a ragged cloak, who with a long pole, pointed now here, now there, and whose motions were implicitly obeyed by the movement of the labourers towards the spot indicated. This witch had dreamed three nights in succession of a great treasure which lay beneath the surface of the field; and for a given quantity of tobacco and whiskey had engaged to point it out to her neighbours, being afraid to undertake it without plenty of company, guarded as it was by a fiery dragon. The country people had worked under the guidance of this woman for three days, but had found nothing to reward their exertions. Mr. Croker's companion, greatly diverted by the scene, advised one of the labourers, instead of searching for gold, to clear and manure the ground, and under this treatment it would yield results as good as if the crock of gold, for which they were searching, had been discovered.

The strange part of the story is that this man, taking him at his word, rented the farm, and suddenly became

rich; subsequently he gave his adviser a circular piece of gold, artistically ornamented, evidently of great antiquity. Several other articles, formed of precious metal, were traced to his hands; and it is therefore evident that it was not entirely owing to the returns of agricultural outlay, that the farmer became a man of wealth and importance in the district.

Urns have been found singly in small 'cists' or stone chambers beneath the surface of the ground, and without any mark to distinguish their existence; hence they are sometimes styled 'field-cists.' Occasionally, on the contrary, they occur aggregated in earthen mounds, and in considerable numbers.

Numerous instances occur in which the plough was the means of discovering these cists, the ploughshare striking and lifting the covering-slab, or the feet of the horses having broken through the covering.

The chamber of the 'field-cist' sometimes contains only the urn and its contents; in other cases there are quantities of charcoal and portions of burned bone. Occasionally the flooring flags and side stones have been vitrified upon the surface, thus demonstrating that the funeral pyre was kindled over the grave after it had been constructed.

This class of small sepulchral chamber, or cist, is frequently met with in the periphery of a large tumulus, or carn, which contains a central or extensive series of chambers, and it is generally supposed to belong to a period subsequent to the original date of the erection of the structure in which they are found. The effects produced by heat—which appears often to have been intense—may be said to be one of the principal characteristics of this class of interment. In many instances a substance styled 'clinker' is found; this, it

is stated, is probably a coarse glass or fusible silicate, 'the result of a combination of sand and alkali, derived from the destruction of organic matter under the influence of heat.'

Like the Christians, the Pagans appear to have had also large cemeteries, where the members of the tribe were buried together; several instances of such have been recorded. In the year 1841, from 150 to 200 urns of various sizes—almost all of them placed in an inverted position, and each of them covering a considerable quantity of human bones—were found in an ancient Pagan cemetery at the Hill of Rath, near Drogheda. On removing the urns, the bones appeared in a little conical heap, the interior of the pile presenting very small fragments, the larger pieces having fallen to the sides, and at the bottom had become mixed with black, unctuous earth, and occasionally small morsels of charred wood. The urns were apparently placed, without any regard to regularity, about two feet asunder. They were embedded in yellow clay, without flagstones to protect them, and had been, therefore, in most cases, pressed in, and broken by the superincumbent earth. The total absence of cists or chambers to protect the urns from superior or lateral pressure, is a remarkable feature in this cemetery. The enclosure, in which the urns were found, occupied the gently sloping declivity of a hill, and the area—from five to six acres in extent—was originally surrounded by a rath-like breastwork of earth.

At the Pagan cemetery of Drumnakilly, county of Tyrone, Mr. W. F. Wakeman exposed numerous urns to view. He found them all in an inverted position, covering calcined bones in a perfectly dry condition; here the urns were placed in two tiers, one above the other. The majority of cinerary fictilia of

the larger type are usually found mouth downwards. One careful observer, on looking into a small cist, uncovered for the first time, thought he could even point out the manner in which the last consignment of the ashes of the dead to the tomb was carried out. The flagstone forming the floor of the little chamber had been plastered round with clay; the ashes were heaped up in the centre, over which the urn was reversed; and some urns may thus have slipped off the mound. An urn was found resting on its side in a carn at the Barr of Fintona, near Trillick, county Tyrone.

In the year 1862 two sepulchral urns were found at Upper Grange, county Kilkenny. When ploughing, a large stone was encountered, on raising which, a small cist, formed of flagstones, was uncovered. In it were two urns; the one contained calcined bones, and the other was inverted over it like a cover, the covering urn being considerably larger than the one containing the burnt bones.

In the year 1827 Mr. Glenny discovered in the townland of Mayo, county Down, six urns, curiously ornamented, and each containing a quantity of calcined bones; in one was a so-called 'lachrymatory,' or diminutive vessel.

One small vase was found inside a much larger one at Broughderg, county Tyrone. In England, where they are much more common, they are perforated with one or more holes. It is thought there is no recorded instance of a vessel so perforated being discovered, in company with human remains, in Ireland.*

Sometimes the urn is enclosed in a cylinder of the

* *Journal R.H.A.A.I.*, vol. v., 4th series, pp. 740–43. W. F. Wakeman has, since this was in press, discovered some fictilia so perforated, in a tumulus near Dublin.

same material. In the year 1849, workmen quarrying in the parish of Castleconnor, county Kilkenny, discovered, about two feet from the surface, a small circular chamber. On the bottom flagstone, about two feet in diameter, was laid, in an inverted position, a small, but very beautiful urn, measuring four inches across the mouth, and two inches in height. This covered a quantity of small bones, and was encompassed by a round earthen cylinder.

In the year 1865 another very fine cylinder of baked clay was discovered at Columbkill, near Thomastown, in the same county. A flagstone lay about eighteen inches beneath the surface, and when raised, there was disclosed the upper rim of an earthen receptacle of partially calcined bones. On removing the clay it was found that the fictile vessel was not an urn, but a mere cylinder, the lower rim of which rested on the flooring. It had hoop-like expansions, at equal distances, all round. The rim and expansions were ornamented with a pattern, formed by a cord which had been impressed while the clay, of which the article was composed, was in a soft state; the intervening spaces were filled with diagonal scorings, as if formed by the point of a sharp instrument. At top and bottom the diameter of the cylinder was about six inches, and across the centre eight inches; its height was fourteen inches. The peasantry of the district look upon the locality where this cylinder was found as a place of ancient pagan sepulture; within the area of a surrounding square mile the remains can be traced of forty-seven sepulchral mounds.

About the year 1860 a man, whilst digging in the townland of Errishacroe, parish of Dunaghy, county Antrim, found an urn deposited mouth downwards, and

a stone had been thrust into the broken bottom, which was turned up. This cylinder contained many fragments of calcined bones. It is thought that the enclosing of a funeral urn in a mere cylinder, and this fracturing of the base, points to a very late period of cremation, when perhaps, the dead being supposed to have become a spirit, an exit was left for it, in the same way that in some districts, after a death has occurred, the window or door of the room which contains the corpse is thrown open, so that the spirit may not be compelled to make its exit *via* the chimney flue.

The well-known superstition of opening the door to let the spirit out has been taken advantage of by Sir Walter Scott, in his tale of 'Guy Mannering,' where he makes Meg Merrilies act in a similar manner; while watching at the bedside of a dying man, she exclaims 'He cannot pass away with that on his mind, it tethers him here. I must open the door,' and withdrawing a bolt, she lifted the latch, exclaiming:

> 'Open lock—end strife;
> Come death, and pass life.'

About the year 1838, a few specimens of mortuary fictilia were found at Danesfort, which is situated on the east side of the road to Stoneyford, county Kilkenny. In one cist were some burnt bones, and a fine and elaborately-ornamented urn, with a cover, having a handle or loop at top for lifting it.

In a *Statistical Account of the Parish of Ballymoyer*, county Armagh, which was written in the year 1816, it is stated that 'there are several tumuli in the mountains, three of which were opened by Sir Walter Synnot. In one he found two circular urns, rudely ornamented with regular figures; they measured about six inches in dia-

meter, and contained small particles of burnt bones. Each urn was covered by a slate.'

In the year 1867 an exploration was made at Ballon Hill, county Carlow, where a cemetery was discovered. The cists were from eighteen inches to two feet in diameter, and were carefully and perfectly closed ; although irregular in form, they approached as nearly to a round or oval as the shape of the stones permitted. On some of the cover-stones of the cists traces of fire were apparent on one side. In another part of the cemetery the cists were ruder in their formation, and also smaller in size; the remains of burnt bones being deposited in the cists without urns, would point either to a difference in date, or that the 'cremated' belonged to a poorer class of society. If these surmises be correct, the burning of the dead was probably—at the period in which this cemetery was used—either a religious rite or an almost invariable custom.

Although many writers assert that no mention is made in ancient Irish MSS. of the ceremony of cremation of the dead amongst the Irish, yet it seems that they may have overlooked indirect references to it. For example, in the *Book of Ballymote* there is an account of the death of Fiachra, brother to Niall of the Nine Hostages. The MS. recounts how 'his grave was made, his mound raised, and his *cluiche cainte* ignited.' *Cluiche cainte* is explained as 'funeral rites, *including* games and dirges.'* Now it is plain that a 'game' or a 'dirge' could not be ignited, and therefore the term *cluiche cainte* must refer to a fire lighted for the purpose, either of consuming the body of the dead chief, or to prepare the funeral feast.

* *Hermathena*, vol. iii., p. 215. Right Rev. Charles Graves, D.D., Bishop of Limerick.

In Irish MSS. there are instances recorded of the punishment for what were then considered as great crimes, by being burnt alive in public, and this ancient *auta da fé* may be regarded as a sacrifice to the deity supposed to be offended. Thus, Eile was burned in a Teine Tulċa, *i.e.* a 'hill-fire'; Murne, daughter of Tadg, druid of Cathair Mor, would have been burned by her father but for dread of the vengeance of Cond Cet Chathach. In the case of the three kings of Emania, among the pledges given that they should rule by rotation were seven chiefs who were liable to be burned if the king, for whom they were security, did not resign at the end of his term of seven years.

Reference to cremation occurs in Wasserschleben's *Die Irische Kanonensammlung*. The passage runs thus:—'A *Sinodus Hibernensis*: Basilion graece, rex latine, huic et basilica, regalis, quia in primis temporibus reges tautum sepeliebantur in ea, nomen sortita est; nam ceteri homines sive igni, sive acervo lapidum conditi sunt.' The place which this passage has found in a collection of Irish Canons must be owing to its containing a recognition of the right of interment within the Church. One is tempted to infer that, in the first instance, the chieftain who adopted the faith desired to be there interred, as had been his ancestors. The second part of the passage seems to denote that cremation continued, as one of the forms of burial, up to the introduction of Christianity into Ireland.*

In one of the first accounts of ancient sepulture, which appeared in the *Transactions* of the Royal Irish Academy, Wm. Beauford, A.B., writing in the year 1788,

* *Journal, Royal Society of Antiquaries of Ireland*, vol. ii., pp. 148, 149.

says :—'The Irish long retained an attachment to their ancient customs and pagan superstitions, especially in the modes of interment; and the custom of burying in consecrated ground was not universal in Ireland in the 12th century on the arrival of the English, as we find it enjoined in the Council of Cashel, held in 1172, and mentioned by Cambrensis.'

A curious entry occurs in the *Annals of Loch Cé*, at so late a date as 1581. It is as follows:—'Brian Caech O'Coinnegain, an eminent cleric, and keeper of a general house of guests, died; and the place of sepulture, which he selected for himself, was—*i. e.* to be buried—at the mound of Baile-an-Tobair (ag ðuṁa baile an Tobair).' The compilers of the *Annals* try to explain this strange incident of the burial of a cleric in a pagan tumulus by the following remark:—'And we think that it was not through want of religion Brian Caech made this selection, but because he saw not the service of God practised in any church near him at that time.'

It seems extraordinary that all memory of cremation should be almost absent from both history and tradition. Cremation appears never to have wholly mastered and driven out the more ancient and customary usage of carnal interment; but the fact remains, that at one and the same time both kinds of burial obtained. Amongst the Celts—according to Caesar and other writers—burning the dead was customary, and he relates how, at one time, with the deceased chief were burned whatever he had valued most, *i. e.* his slaves, his horses, his dogs, &c. It may be surmised that calcined human remains found in Ireland are generally those of the 'upper stratum' of society, though—judging from the exploration in the cemetery at Ballon Hill—it may, in

some districts, have been the universal custom; but cremation was a funeral luxury. Pliny states that it was not an ancient institution; some of the noble Roman families never adopted the new fashion; whilst in later times, amongst the Greeks, cremation, owing to the great expense of the funeral pyre, was by no means universal.

The primitive fictilia of Ireland is of good workmanship, and the forms being arrived at, independent of assistance from the wheel, were therefore free to any kind of imitative influence. A rude hand-made, oval, shallow, dish-shaped vessel, intended presumably for a lamp, and having at one end a spout, was found on prehistoric hut-sites in the sand-dunes near Portstewart. It differs from any pottery previously discovered in such localities.*

Although sun-dried and baked earthen urns have been found in great numbers throughout Ireland, yet stone-urns are of extreme rarity. In the year 1852—at the Exhibition of Ulster Antiquities, held in Belfast—though all the chief private collections of the province were there assembled, yet very few specimens of stone-urns appeared. About the year 1853, men engaged in removing stones from a field in a wild and hilly district in the parish of Skerry, four miles from Ballymena, came upon a large flat slab, not far from the surface of the ground. On raising it, there was found, underneath, an oblong, hollow space, about three or four feet in length, formed of rude, flat stones, and in this were discovered a very perfect stone-urn and a remarkable lozenge-shaped implement of stone, but no bones or other remains of any kind. The urn, when found, was placed mouth up. The material of which it was

* *Journal R.H.A.A.I.*, vol. vi., 4th series, p. 318.

Fig. 107.

Sepulchral Stone Urn, found in the county Antrim. (Half real size.)
(Reproduced from the *Ulster Journal of Archæology*, vol. ix., p. 236.)

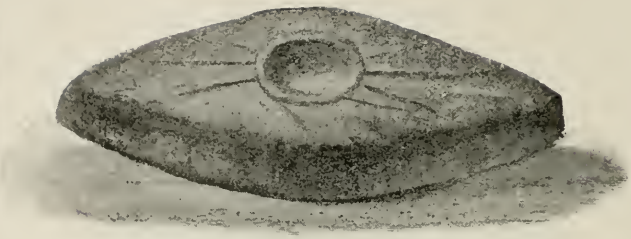


Fig. 107 A.

Lozenge-shaped Stone Implement found with fig. 107.
(Half real size.)

Fig. 108.

Sepulchral Stone Urns, locality of discovery unknown.
(About one-third real size.)
(Reproduced from the *Ulster Journal of Archæology*, vol. ix., p. 238.)

made is hard, reddish sandstone, which seems to have acquired its dark colour, on the surface, from exposure to fire. In form this specimen differs altogether from urns of baked clay; it also differs from them essentially in the depth of its cavity. The interior of a clay-urn, deducting the thickness of the material, is always of the same form and depth as the exterior; but the stone-urn in question was hollowed out only to the depth of one inch and a quarter, the height of the urn being five inches. Both the urn and the corresponding cavity are oval in form, the ornamentation being of the simplest kind, and the lines not deeply cut. The circumstances under which this urn was discovered leave no doubt of its sepulchral character. The lozenge-shaped implement found with the urn may be styled a hammer (fig. 107 A).

Representations of two other stone urns are given in figure 108. Nothing is known of the circumstances under which they were found. They are both smaller than the one previously figured, but very similar in form and material. They are both oval; the cavities extremely shallow, one being only three-quarters of an inch deep. The total height of the taller urn is four inches. Both specimens present a dark colour on the surface, although the reddish sandstone of which they are formed is perceptible in places.

A very rare and beautiful example of a large decorated stone-urn is in the collection of the Royal Irish Academy, but from what locality obtained is unknown. It is composed of limestone, and decorated with two bands of zigzag lines; it has also, on each side, a circle, the one raised, the other flat and grooved (fig. 109). It had evidently been worked out with metal tools, and is probably of much later date than the generality of fictile urns.

In levelling an old rath near Trummery, in county Antrim, a stone urn was found. The only attempt at ornament is a series of bands produced by furrows sunk in the stone at irregular distances. The material is hard sandstone, the surface being of a dark colour; its height is about five inches, and its external diameter seven inches.

A remarkably fine stone urn was found in a tumulus at Dunadry, county Antrim. The surface of the mound consisted of a rich, black, loamy soil, and the farmer

Fig. 109.—Sepulchral Stone Urn. In the Collection of the Royal Irish Academy. (About one-seventh real size.)

on whose land it was situated resolved to spread it over the adjoining ground. In doing this he came upon a cist in which he discovered—at a depth of three feet from the surface—a human skeleton, in a horizontal position, having on its hand a ring of lignite, and at the feet a stone urn and a little glass ring. The urn was distinguished, from those previously found, by having handles at the sides and a 'brass' cover on the top. The mound is now totally effaced. In the Collection of the Royal Irish Academy there

are bowl-shaped vessels, some of which were probably found in sepulchres.

We have, as yet, no information to guide us in assigning a date for the use of such sepulchral urns; the use of stone, however, would be resorted to only in exceptional cases, in order to form a more costly and more durable depository for the remains of distinguished persons, or perhaps in situations where suitable clay could not be procured.

Sir T. Molyneux, in the Appendix to Boate's *Natural History of Ireland*, published in 1726, gives an engraving of one found in a mound at Knowth, county Meath. It was discovered in a cist—about five feet long and four broad—made of four flag-stones. The urn itself was of an 'oblong-round' figure, somewhat the shape of the upper part of a human skull, but much larger. It was composed of a very coarse, sandy, grit-like freestone; was about sixteen inches in length, twelve in breadth, and eleven in height. Its cavity, in which were found fragments of burnt bones, was not above five inches deep. The outside was adorned with rude lines and carving.

In souterrains, rude stone-basins are by no means rare finds. In the year 1848 one was discovered in a ruined chamber on the lands of Paughenstown, near Ardee.

Near Knockingen, where the little river Delvin, dividing the counties of Dublin and Meath, falls into the sea, within the chamber of a tumulus, was found a rude stone basin, or large stone, with a cavity or hollow formed in it. This stone bore marks of fire, and around it on all sides were remains of charcoal and calcined bones.

Figure 110 is a hollowed stone in the eastern recess of the sepulchral chamber of Newgrange, on the Boyne.

Until lately it was covered by a similar basin removed by labourers of the Board of Works.

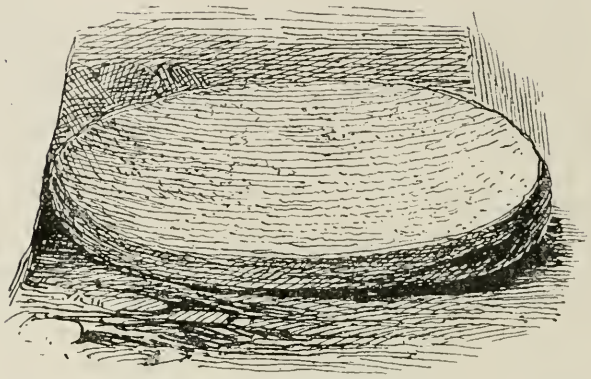


Fig. 110.—Hollowed Stone, in the Eastern Recess of the Sepulchral Chamber of Newgrange, on the Boyne. 3 ft. 6 in. by 3 ft.
(From a Drawing and measurements by W. F. Wakeman.)

Figure 111 is a shallow stone basin at Glendalough, county Wicklow. It resembles an example to be seen near *Teampull-na-Bfear*, on the Island of Inismurray. Specimens in the vicinity of ancient churches bear a striking analogy to the mysterious basins sometimes met with in the interior chambers of carns.

Whether the hollows were used for containing the ashes of the dead, for holding water,* or some other offering to the manes of the departed, is not clear; but

* This good description of a water-rite occurs in the *Leabhar na h-Uidhre*:—A Druid commanded a child to be washed, with many attendant ceremonies, every morning, on the back of a cow. At the end of twelve months the cow, with the boy on its back, suddenly leaped into the sea, and was immediately

one thing is certain, whatever their original use may have been, they, in many cases, were sanctified to the new religion, and by the early missionaries utilised, probably, as baptismal fonts. Instances are, however, on record, in which ashes and calcined bones have been found in them when first discovered.

Not far from Dungiven, county Derry, there is a holy well, still much frequented, and 'the stone round which the penitent used to go, after performing the ceremonies at the well, is in the river.' Near Claudy, in the same county, there is a pool in the stream below Kilgort Bridge, called 'Turish Lyn'; many country-people yet believe that immersion in the water is a cure for all manner of diseases. On May Eve the devotees bathe in the pool, and the offerings, tied to the bush overhanging the 'lyn,' vary from a piece of cloth to a lock of hair. Sometimes three white stones, picked up from the pool, are deposited on the bank.

A minute classification of cinerary fictilia and of stone urns has not been attempted, but they have been divided into two classes; that in which height is in excess of breadth, and that in which breadth is in excess of height.

With regard to urns formed of stone, it is clear that the first-named type is developed from a concave stone, at first probably a freak of nature, and, on account of its form, selected by the primitive cremationist, until, at length, a well-proportioned and sculptured stone vase is arrived at. It is apparent that, like their

changed into a rock. The child, however, by this time cleansed from the stain and disgrace of his birth, was uninjured, and finally rose to great eminence. The ceremony of swimming cattle as a cure for disease used to take place on the first Sunday in harvest, *i. e.* Garland Sunday.

earthenware prototypes, they were, in many instances, intended as receptacles for the ashes of the dead; yet it is possible that the rude and shallow basins may have been also connected with some water-rite.

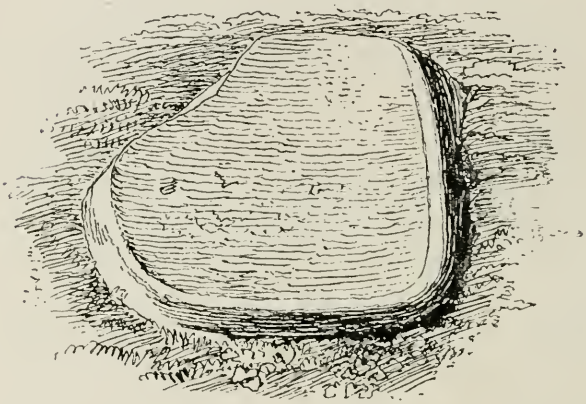


Fig. 111.—Shallow Stone Basin at Glendalough, county Wicklow. 18 inches by 15 inches.
(From a Drawing and measurements by W. F. Wakeman.)

CHAPTER IX.

FLINT, STONE, BONE, AND WOODEN IMPLEMENTS—BULLAUNS—WHORLS.

OTH tradition and ethnology aver that numerous migrations of the human family have taken place at various periods, so that it is difficult to decide whether the so-called Ages of Stone and Bronze are, in Ireland, to be attributed to the development of one race, continued throughout a series of ages, or are due to successive impulses derived from the advent of new occupants of the country. It is, however, almost self-evident that, in Ireland, the Iron Age commenced abruptly; yet there was a great overlapping and commingling in the use of materials.

With about the same general powers of mind, more or less influenced by local surroundings, the tendency of human beings, under somewhat similar circumstances, has been to utilize the same materials, and to form implements almost identical in shape. The flint arrow- and spear-heads, and the stone implements, found in such vast quantities throughout Ireland, are almost identical with those, wherever traces of primitive man are discovered. There is a general resemblance between all flint implements; yet there are variations, more or less observable, in the weapons from different countries. They have been found over the greater portion of Europe, in northern Africa, Egypt, Palestine, India, and America—over an area startling from its

extent. Some collectors have often undoubtedly been deceived by the similarity of accidental flint-flakes to artificial forms, and have classed amongst the latter some of the former; whilst others have had counterfeits imposed on them, fabricated to supply the demand. Allowing for all this, the conclusions which have been drawn from an immense number of genuine specimens is not affected, and it cannot be disputed that the vast majority of implements are the product of the first efforts of primitive man, for combativeness appears to be the predominant instinct of man in his barbarous condition, and his earliest powers of invention were devoted to form instruments of offence and defence.

The late E. T. Hardman, G.S.I., pointed out that, in the northern portion of Australia there are extensive deposits of agate, and of various species of flint and jasper, often forming ranges miles in extent, and that the summits of many of these hills have been used as manufactories is evidenced by the quantity of flint flakes lying about, and which are in shape almost exactly similar to those of Antrim. In the river-beds, besides flint, &c., large pebbles of rock-crystal abound. These also are utilized by the natives, who form from them very beautiful spear-heads as well as knives; indeed, there can be no better method of determining the uses of ancient Irish implements than by endeavouring to ascertain for what purpose uncivilized man of the present day uses implements of a corresponding class. Thus, a comparison of Irish antiquities, with the remains of a similar character preserved in museums and collections of other countries is an obvious means of arriving at a decision, and the materials for such a study are rapidly accumulating since the importance of the study of archæology has become apparent.

Although large collections of antiquities have been brought to light, yet they have been very imperfectly chronicled, for our earlier, and indeed many of our late explorers, neglected to put on record what they considered to be of no real value. In the early days of this century matters were even worse, as only those articles that appeared to be of an unique type were retained. Flints and other objects of stone were, not many years ago, so little valued that one collector who lived in a neighbourhood where they were very abundant, and had obtained a large supply, offered to sell them 'at 4*d.* a quart.' A gentleman who had an extensive collection, while retaining a quantity of useless forgeries and rubbish, threw the 'scrapers' among the gravel of his garden-walks; another antiquary who understood their value obtained permission to remove and place them in his own museum. Latterly, however, owing to the greater care observed in the mode of collecting, accurate classification of our prehistoric antiquities may be considered obtainable.

There seems to have been a lengthened period in yet unwritten history when, to man, metal of any kind was unknown, and this state, in Ireland, lasted longer than on the European Continent. The time during which stone, alone was used, is subdivided by archæologists into two eras. In the palæolithic or ancient stone period, the manufacture of implements was so rude that it is difficult to distinguish between the flints artificially chipped by human agency and those shaped by natural causes; in the neolithic or later stone period implements were worked with more care and skill, sometimes beautifully finished and polished, and they bear distinct traces of an advance in the art of fabrication. Flint-flakes, evidently of artificial manufacture, are

found at the bottom of bogs and in gravel deposits. In Ireland bogs are the result of growth, and the gradual decomposition of vegetable matter; but the depth of boggy material, except under peculiar circumstances, affords no means of determining the date of deposit of any article, as the bog may have grown either rapidly or very slowly. It has been observed that weighty objects gradually force their way through soft, peaty soil, until they rest on the impervious substratum; gravel and heavy earth, used for renewing the surface of peaty land, have been known to work their way right through to the substratum.

When an attempt is made to arrange chronologically the various forms that flint implements assume, we must first decide which is the earliest and primitive type; for an implement that is merely chipped may belong to the neolithic, perhaps to the bronze, and even to the iron age. It is only when we find these objects in conjunction with other remains from which we may assume that they were all deposited contemporaneously, that any standpoint is attainable from which to theorize. In an attempt to elucidate its history, the surroundings of an article are often more valuable than the object itself, and our sole mode of measuring the antiquity of the earliest relics of primitive man is by retrogressive, and not by progressive investigation. We extend man's existence on the earth backward, until he is left in company with strange animals, and he then appears to have been but little removed in social standing from the brute creation; on the other hand there is evidence that races acquainted with the use of metallic weapons were accustomed to tip their arrows with bone and flint; thus flint implements fabricated in the earliest periods of human existence remained, for various reasons, in continuous use

until we enter upon historical times. This is no new idea, for so early as the year 1686, Dr. Plot, in his *Natural History of Staffordshire*, when writing on the use of iron by the Britons in the time of Caesar, says: 'We have reason to believe that, for the most part, at least, they sharpened their warlike instruments rather with stone than metal, especially in the more northerly and inland countries.'

In collecting implements of flint, the antiquary often meets with an unlooked-for difficulty, owing to a superstition prevalent, not only in Ireland, but throughout Great Britain and the European Continent.

Cattle that commence to fail were looked upon by the country-people as 'elf-shot,' *i.e.* have been subjected to the projectiles of the 'good people' or fairies. Collins, in his ode on the superstitions of the Highlands of Scotland, thus describes this fanciful idea:—

> 'There every herd by sad experience knows
> How wing'd with fate their elf-shot arrows fly;
> Where the sick ewe her summer food foregoes,
> Or, stretched on earth, the heart-smit heifers lie.'

Another curious instance of this superstition may be here noticed. A gentleman, some short time away from home, had on his return, inquired after his cattle, and was informed they were then all well, but that during his absence one had been 'elf-shot,' and would have died, had not he (his informant) called in a 'doctor,' who prescribed remedies of the usual kind as well as giving a drink from a bucket in which lay a stone axe. This same steward would not return home on a dark night without having a lighted sod of turf stuck on to the end of his walking-stick for the purpose of warding off the 'good people.'

The Rev. P. Moore, when presenting a stone amulet to the Kilkenny Museum, in the year 1851, stated the curious fact that the peasantry, when obliged to sleep in the open air, believe that they are safe from fairy influence if they carry one of these amulets about them.

Sir John Evans, in his *Ancient Stone Implements of Great Britain*, states that the superstitious beliefs held with regard to stone implements are much the same amongst the Germans as amongst the Irish. They 'are held to preserve from lightning the houses in which they are kept; they perspire when a storm is approaching; they are good for diseases of man and beast; they increase the milk of cows; they assist the birth of children, and powder scraped from them may be taken, with advantage, for various childish diseases.'

Worked flints, when used as amulets, were further accredited with the power of preserving the wearers from dangers, and from the influence of malignant spirits. In Italy they are still in common use as preservatives against evil, and in our own land it is only within the present century that they have ceased to be carried as charms. It is strange that as soon as bronze and iron had superseded flint, implements formed of the latter substance should have come to be regarded as sacred and supernatural objects, and that common, and apparently self-evident utilitarian implements of savage life, should be looked on as preserving 'virtues as wonderful as they are incredible.' The Jews still perform the rite of circumcision with flint knives.

In Ireland, flint is found in greatest quantity in the northern parts, more especially in the counties of Antrim, Down, and Derry, and from that quarter the vast majority of specimens in our museums are procured. The geological features of the district in which

worked-flints are found in greatest abundance are very remarkable, and are thus described by William Gray, M.R.I.A. :—'An immense sheet of very dark basaltic rocks, covers nearly the entire of Antrim, and portions of the adjoining counties, to a maximum thickness of about 900 feet. This thick sheet of rocks is more or less bounded by escarpments, forming in many places bold cliffs, particularly along the coast, where they enhance the grandeur of the scenery and form combinations of the greatest beauty. Many of those escarpments expose the white limestone or chalk-rock that underlies the black basaltic-sheet with which the chalk is probably co-extensive. The chalk is well exposed below the basalt on the face of the cliff along the coast road, particularly near Glenarm, where the layers of flint-bearing chalk form a face of considerable height below the sheets of overlying basalt. Bands of flint-nodules occur throughout the chalk, and between the basalt and the chalk, there is often a great accumulation of flint, the result of the sub-ærial denudation of the chalk, prior to the deposition of the basalt; and as the face of the cliff is worn away by atmospheric and other agencies, the flints fall and accumulate along the talus, or under-cliff, at the base of the rock-escarpments. The white cliffs of Antrim were, no doubt, objects of great interest to the early colonists of Ireland who, after establishing themselves here, discovered the abundance of flints, and thus guided by local advantages, selected the sites of flint-factories,' and doubtless carried on a trade in worked-flints with other parts of the island; indeed, it has been even surmised that the raw material itself was carried long distances for the purpose of manufacture by the 'commercial travellers' of the day, hoards of flint objects being occasionally found

together, in districts to which the natural flint is foreign.

Appearances have, in many places, been observed suggestive of different ages being represented by the primitive folk who had worked these. The flint-flakes were in general small, and it was evident that larger and older flakes or cores had been, at a later date, utilized by workmen, and their former surface considerably changed. The interval between the original and the newer manufacture must have lasted for a period sufficient to allow a weathered crust to coat over the markings of the early manufacture, of which traces were perceptible where the old surface had not been removed. These flints, it is alleged, belong to the palæolithic or ancient stone period, and the men who hunted the megaceros must have used similar implements as spear- or arrow-heads, whilst with knives of flint they skinned and cut up their quarry, converted its sinews into thread, its skin into coverings for the body, and its bones into tools, weapons, and ornaments.

A thorough and exhaustive examination of the gravels or raised beach at Larne, was made by a Committee of the Belfast Naturalists' Field Club, in the year 1886. This careful investigation demonstrated the fact that the gravels are of marine origin, and contain numerous shells which, by their character, indicated that the temperature of the sea, during the deposition of the material in which they were embedded, was much as it is now. The gravels were found to contain worked flints all through their depth; the flints are not numerous in the lower beds, yet they are in sufficient numbers to demonstrate that man lived in the locality during the period when the gravels were in process of being deposited. They present probably the oldest

FIG. 111A.

Palaeolithic types of Flints. (One-fourth real size.)

This figure shows two examples of the river-gravel Palaeolithic implements, one from Suffolk (1), and one from Devonshire (2), and below them two worked flints from the Larne gravels. No. 3 is formed from a flint nodule pointed at one end, and the other end is left with the rounded natural surface of the flint. No 4, also from Larne, is flat on one side, and chipped with a tongue-shaped surface on the other. Like Nos. 1 and 2, Nos. 3 and 4 are very rough. From photographs of the objects by William Gray, M.R.I.A.—*Reproduced from Proc. Belfast Naturalists' Field Club*, vol. iii., series ii., p. 614.

traces of flint cores which primitive man has left in Ireland. Many are so weathered and round that only an expert can detect them, yet the greater number are so well and clearly marked as to satisfy any ordinary observer that they formed the original block of flint from which the flakes were struck. 'They are of various sizes, some very large, and some very small, indeed not more than three-quarters of an inch in length, yet they all show the scars and depressions from which the flakes were struck off. Usually the rough core shows the outside crust of the flint nodule at one side, but many show that the manipulator struck off flakes all round.'*

These are the earliest relics of pre-historic times at present known to us, though it is to be suspected that they are not so, as a matter of fact, for as in star-land the astronomer is ever piercing further and further forward into the realm of space, so in terrestrial matters the archæologist is ever unearthing traces of earlier races.

Flint-flakes are met with in great numbers in the gravel at both sides of Belfast Lough; they are even more numerous at Larne, and are common on Island Magee, and the slopes below the chalk along the coast to Ballintoy; they occur over the islands of Strangford Lough, and have also been found at Greencastle, on the south coast of Down. They are found almost everywhere—in tilled fields, on the sea-shore, and along the chalk outcrop; amongst them are well-formed knives and lance-heads, thumb-flints, adzes, and hatchets. In a very short period the late Mr. Edward Benn collected upwards of 12,000 specimens of worked flints in the county Antrim; all these were found in a somewhat

* *Proceedings, Belfast Naturalist's Field Club*, vol. iii., series ii., p. 618, William Gray, M.R.I.A.

elevated district, lying along the slopes of low mountains, and within a circumference of three miles. They were not scattered indiscriminately, but were confined to certain localities; nearly a quarter of the number were of little interest, as they were the remains left after striking off the finished object.

The site of an open-air flint-workshop at Glenhue, county Antrim, has been described by the Rev. G. Raphael Buick. The tilled ground was found to be strewn with scrapers, cores, hammer-stones, and flakes. In the course of an hour, over a hundred of these articles were gathered, and further search resulted in adding considerably to their number, so that, altogether, within a radius of less than fifty yards, three hundred and seventy-three scrapers were obtained, together with arrow-heads, hollow-scrapers, knives, saws, a few flakes of basalt, a small axe of stone, and a stone-bead of unusual shape. There was no trace of pottery.

Flint implements are found, but in lesser quantities, in every part of Ireland; in primitive sepulchres, in middens, in raths, in cashels, in the sites of primitive settlements on the sea-shore, in lake-dwellings, and in every conceivable locality. There is great difference in the skill exhibited in their workmanship; some are extremely well made—neatly, and even elegantly formed; others are quite rough and rude in finish; arrow-heads are generally turned up in ground which had not before been broken; they would seem to have been used for destroying game, and great numbers in this way must have been lost, carried off by wounded animals, or, when the object was missed, were lost in the rank vegetation, and are now found at no great distance from the surface.

Flint-cores, or the nuclei from which implements

were struck off, present distinct traces of the mode of the manufacture of primitive-worked flints. The core (fig. 112) from which they were made was flung aside by the worker, when he had chipped off as much as the nodule afforded; hence a great number of these relics of primitive workshops are brought to light. The probable manner in which the first rough flint implements were formed is thus suggested:—'If an ordinary oblong flint-nodule be broken across in the middle, the fracture is conchoidal, or shell-shaped, and if one of the portions of that flint were set on end, the artist could chip off with a (stone) hammer, or with a (stone) chisel and mallet, a number of fine flakes, running the length of the sides of the mass, more or less thin and long, or broad and thick, according to the natural purity of the flint, and perhaps the dexterity of the worker. Each scale or flake, no matter what its outer shape or outline, will always present the conchoidal fracture. The outside flakes, bearing the usual rough cortical silicate of lime investiture, were generally valueless, and consequently cast aside.'

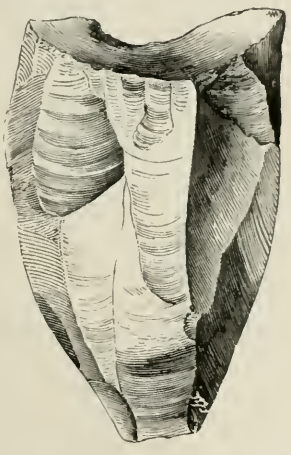


Fig. 112.
Core of Flint, from which a series of flakes have been struck off. (Full size.)

'In chipping or scaling a mass of flint, the artist appears to have struck it on the end, and as he passed round the block, striking in the centre of the angle made by the junction of any two chips, the scale must

always have presented more or less of an obtusely triangular figure in its section, and, owing to the tapering nature of the flint mass, a leaf-like outline; while, from the peculiar fracture or cleavage of all flint, it was curved in the longitudinal direction, and also slightly convex from side to side upon the under surface. This under-surface is invariably smooth, and to a certain degree polished; but from the deficiency of lines upon it, and its invariable curvature, it can easily be distinguished from the smoothing and polishing produced by art. The edges of nearly all these flakes are sharp, and generally meet at a point at the extremity, while the butt, or portion to which the tool was applied, is usually chipped and broken, as if it required repeated blows to get it off. Each surface on the convex aspect is smooth, though occasionally presenting the wave-like appearance of broken glass.' *

This was primitive man's first attempt at a weapon, or tool, and though, at first sight, these chips might be taken for fragments detached by natural causes (fig. 113), yet, if closely examined, it will be perceived that the fractures have been effected by human agency. They possess distinct characteristics: one side displays a smooth surface, on which, however, there is a protuberance, or bulb—styled by archæologists the bulb of percussion—while the reverse surface exhibits a corresponding depression. As the bulb of percussion is a principal test for determining the artificial workmanship of flints, it may be well to quote what Mr. W. J. Knowles has written on the subject:—'I have made some experiments in breaking flint, and, as far as my experience goes, the bulb can only be produced by a blow. The

* *Catalogue Museum R.I.A.*, pp. 7, 8.

Fig. 113.—Cores and flakes of Flint, from the site of a Lake-dwelling near Nobber, county Meath. (About two-thirds real size.)

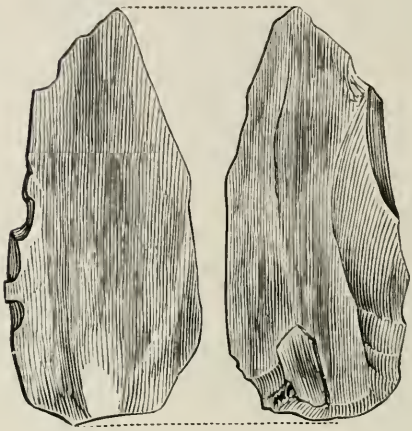


Fig. 114.

Flake of Basalt from Toombridge. (Full size.)

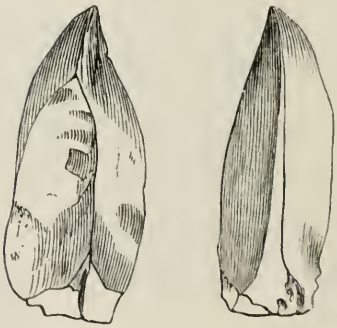


Fig. 115.

Flake of Flint from a Lake-dwelling in Lough Ravel. (Half real size.)

cause of the bulb I imagine to be this—When a blow is struck on some homogeneous substance like flint, a series of waves will be produced through the body of the object struck, all radiating from the point of impact. The fracture is determined, I believe, by the course of these waves and a downward force which is also impacted. The waves, proceeding in concentric circles, will cause the cone, or bulb, which, it will be observed, is sometimes step-like in character.' Flint-flakes generally vary in size from half an inch to nearly five inches in length, and from half an inch to three inches in the broadest part (figs. 114, 115).

The late E. T. Hardman stated that in some localities of the northern territory of South Australia and northern Queensland the natives do not seem to have progressed beyond this stage of flint manufacture, and are content with flakes obtained by striking the flint on a large stone, by which means they can sometimes obtain a sharp tapering flake, but they are mostly of a very rude construction. Oval or egg-shaped stones, from four to five inches in the long diameter, and more or less indented on one or both surfaces, are not uncommon in Ireland. Their use is at present problematic, but they are by some, believed to have been used for chipping flint and stone, the finger and thumb, when working, being placed in the indentations. Some of these stones are natural water-worn pebbles, but others have been evidently shaped artificially (fig. 116). The indentations on the sides seem to have been chipped or picked

Fig. 116.

Naturally egg-shaped piece of Felspar, with worked Indentations, probably used for chipping flint. 4 ins. long by 3 ins. wide. (About one-quarter real size.)

out by a kind of punch, and in some instances this is only the first stage in the process of formation of a hole passing through the object, though this somewhat militates against the theory of their use.

A few of the largest knife-shaped flints, with thick, blunt backs, might have been readily held in the hand, and have answered all the purposes of a modern iron knife, for skinning and cutting up an animal; and a gentleman relates that a countryman, having killed a hare, skinned and divided it very neatly with one of these flints. A curious flint-knife, one end of which was neatly and firmly covered with moss to serve as a handle, was found in the river Bann.*

Fig. 117.
Flint Arrow-head, with haft and tying still adhering, found at Ballykillen, King's Co. (Half real size.)

At present there is no evidence that any of the smaller flakes were ever fitted into handles, but there can be little doubt that such was the case in general, as, from their small size, many could not possibly have been used without some mechanical assistance.

There are as yet only three recorded instances in Ireland of a flint arrow-head (fig. 117) having been found still fixed to its shaft, though the barbed extremity could not have been used without such an appliance. On the site of lake-dwellings on the Continent, flint-flakes have been discovered set in small wooden handles, similar to those used by modern cabinet-makers: it has also been suggested that some

* *Trans. Kil. A. Society*, vol. ii., p. 282. *Proc. R.I.A.*, vol. v., p. 176.

of the Irish flakes were inserted into war-clubs, after the manner in which the teeth of sharks were set into the weapons used by many tribes of the Pacific islanders.

The operation of chipping was executed by a series of gentle blows with another sharp-pointed piece of flint; at first the convex side of the article was alone chipped; in the more perfect examples both sides were finished. Only a very good quality of flint was susceptible of the best manufacture, hence, as a general rule, articles made of the best semi-transparent flint display the perfection of finish, whilst articles fashioned of inferior material are very rudely wrought.

Great patience and skill must have been required in the manufacture, in which, by repeated and skilful blows, bit by bit was struck off. The majority of articles of this secondary process of manufacture were dagger, or knife-shaped, and some of them have been carefully chipped on every surface, so as to present a triangular section. In one locality many splinters of flint were found lying about—traces of a prehistoric flint-implement manufactory. Amongst these were an unfinished arrow-head, and a triangular piece of flint, evidently intended to form one. There would have been difficulty in deciding as to the use of this triangular object, if the chipped flints around, in various stages of manufacture, had not demonstrated its intended use.

Flint-daggers, or knives, could not, from their shape, have been employed as projectiles, and must, therefore, have been fitted with handles of other materials, though in several instances they were formed with what appears to have been intended as a haft, or handle, wrought out of the nodule from which they were chipped. Many of the rudest of the flint-flakes had evidently

never been used, and may have been either discarded for their roughness, or were the chips struck off in forming more elaborate articles.

Rude implements of ordinary stone, evidently intended for use as weapons, are not so common as those formed of flint. A few fragments of sword- or dagger-shaped stones have come to light, but it is thought that

Fig. 118.

Fig. 119.

Fig. 120.

First Variety of Arrow-head. (Figs. 118–120.)

Fig. 118.—Leaf-shaped Arrow-head of the Lozenge type. (Full size.)
Fig. 119.—Leaf-shaped Arrow-head. (Full size.)
Fig. 120.—Leaf-shaped Arrow-head, with rounded base. (Full size.)

no perfect example has as yet been preserved. One fragmentary specimen appears to resemble the leaf-form of bronze-dagger.

'It is curious,' remarks P. W. Joyce, 'that bows and arrows are very seldom mentioned by our old writers, and the passages supposed to refer to them are so indistinct, that if we had no other evidence, it might be difficult to prove that the use of the bow was known at all to the ancient Irish.' Archæology is then appealed to. 'However, the matter is placed beyond dispute by

the fact that flint arrow-heads are constantly found in the ground in various parts of the country.'

Arrow-heads of flint may be divided into three classes; they are rarely, if ever, polished, but are beautifully chipped.

The first variety may be designated the *leaf-shaped*. The specimens are generally thin and elaborately wrought. The leaf-shape is observable in the entire class, but some are rounded at the base, whilst others are pointed at both ends,—sometimes are even

Fig. 121. Fig. 122. Fig. 123. Fig. 124.

Second Variety of Arrow-head. (Figs. 121–124.)

Fig. 121.—Triangular Arrow-head, greatly hollowed for reception of the shaft. (Full size.)

Fig. 122.—Triangular Arrow-head, with notches to hold tying. (Full size.)

Fig. 123.—Triangular Arrow-head. (Full size.)

Fig. 124.—Triangular Arrow-head, hollowed for reception of the shaft. (Full size.)

in lozenge form. There is little difference between the leaf-shaped arrow-head and the spear-head, except in size; the outline, however, of the latter is somewhat straighter.

Figures 118, 119, and 120 are typical examples of this class, *i.e.* the lozenge, the leaf, and the rounded-base shape.

The second or *triangular variety* of Irish arrow-head is subject to more developments than that presented

by the first type. Sometimes it is slightly hollowed at the base, then there are two slight indentations at either side, for catching the thong which attached it to the shaft; it then becomes more and more hollowed at the base, assuming some really graceful forms (figs. 121, 122, 123, 124).

The third, or *stemmed arrow-head*, has a tang, or projection, for insertion into the shaft, and the wings, on either side, as in the previous class, gradually bend down, and increase in size, until they extend on the same line as, and sometimes descend even lower, than

Fig. 125.

Fig. 126.

Fig. 127.

THIRD VARIETY OF ARROW-HEAD. (Figs. 125–130.)

Fig. 125.—Stemmed Arrow-head, ordinary type. (Full size.)
Fig. 126.—Stemmed and winged Arrow-head. (Full size.)
Fig. 127.—Stemmed and winged Arrow-head, extreme type. (Full size.)

the end of the tang, forming a true barbed arrow-head; some few specimens have serrated edges, and saw-like indentations. Although of frequent occurrence on flint implements found in the north of Europe, this peculiarity of manufacture is comparatively rare in Ireland (figs. 125–130).

E. T. Hardman has described the manufacture of arrow-heads, at which he himself was present, in Western Australia, the material used by the native workman

being portion of a broken bottle. He first knocked off a piece of glass of suitable size, then procured a round sandstone pebble, which he slightly rubbed on another stone, to give it a 'bite,' or 'tooth.' The next requisite was a small piece of wood. Seating himself, he placed the wood beneath his toes, and with light blows, adapted to the nature of the flake he wished to strike off — deftly chipped the glass into its first rude, leaf-shaped form.

Fig. 128.

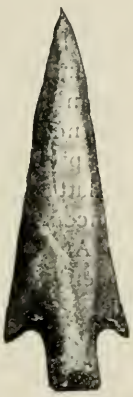


Fig. 129.

Fig. 130.

THIRD VARIETY OF ARROW-HEAD—*continued.*

Fig. 128.—Stemmed Arrow-head, with serrated edges; rare type. (Full size.)
Fig. 129.—Stemmed Arrow-head, elongated type, from Co. Sligo. (Full size.)
Fig. 130.—Stemmed Arrow-head, ordinary type, from a Lake-dwelling in Glencar, Co. Sligo. (Full size.)

This being accomplished, lighter blows were given, until a certain amount of finish was obtained. Then, by slight taps from a small flat-edged stone, the fine point and finely-serrated edge were gradually formed. The whole operation did not occupy more than half-an-hour.

The poet Longfellow also describes how, in the 'New World':—

> 'At the doorway of his wigwam
> Sat the ancient arrow maker,
> In the land of the Dacotahs
> Making arrow-heads of jasper,
> Arrow-heads of chalcedony.'

Sir John Evans points out the facility with which flakes may be produced from flint by means of a rounded pebble, used as a hammer, and not necessarily attached to a handle, but simply held in the hand. He also notices that 'proper attention has not been paid to the hammer-stones, which, in all probability, occur with the chippings of flint.' This latter conjecture is fully corroborated by the occurrence of these hammer-stones along with flint-chips in Australia, and their known use; also their having been discovered under similar circumstances in Ireland.

It is difficult to draw a definite line at where the large arrow-head of the first variety ends, and the small-sized spear-head commences; in fact the arrow-head may have been used for the dual purpose. The fully-developed spear-head differs from the first type of arrow-head in its flatness, thinness, polish, straightness of outline, and greater size, some being 7 inches in length. Evidently they were first chipped carefully into proper form, and then smoothed by friction on a level surface. These heavy javelins or spear-heads (fig. 131) may have been used as projectiles, as well as for hand-weapons, and when cast, may have had their range and velocity increased by mechanical means, like the 'throwing-stick,' used by the natives of Australia, at the end of which there is a hook, to be inserted into the butt of the spear;

to some extent this acts as a primitive bow, in giving considerable initial velocity.

To a class of circular, or oval-shaped stones, antiquarians have assigned the name of 'sling-stones.' Some are highly polished all over, having been chipped and wrought with the greatest care as regards form and finish (fig. 132). One of the best examples in the collection of the Royal Irish Academy measures three inches in diameter, and is three-quarters of an inch thick in the centre. In examples that are made of stone there is generally, in the centre of each flat surface, a slight indentation, such as might be effected with a very hard flint-punch. Other stones, of peculiar shape, are believed by some to have been also used as sling-stones, but it would be strange if such extreme care and trouble were taken to form missiles which, when once discharged, might never be recovered, while in the bed of the brook, or on the sea-beach, the smooth water-worn pebble was, in any quantity, ready at hand.

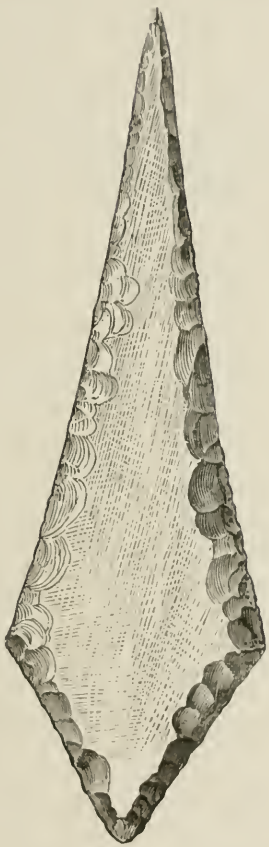


Fig. 131.
Javelin, or spear-head, found in the Co. Down. (Two-thirds real size.)

The Cross of Muirdach, pronounced Murray, at Monasterboice, county Louth, has long been considered the most remarkable object of its class in Ireland. There are two Muirdachs mentioned in the Irish Annals in connection with Monasterboice, one who died in the year 844, the second in 924. Upon one of the panels of the shaft is an exceedingly interesting piece of sculpture (fig. 133), representing the dress and equipment of warriors of the commencement of the 9th or of the 10th century. It will be observed that the second figure from the left corner carries in his right hand a sling, while his left grasps a battle-axe. This is, it is thought, the earliest pictorial representation of a sling existing in Ireland, though slings were used as warlike weapons from time immemorial.

Fig. 132.
Disc of Flint, supposed to have been used as a sling-stone. (One-third real size.)

There are other implements of flint to be noticed, notably picks and chisels —which could be classed as tools. The pick (fig. 134), however, may have been used also as a spear-head, for, although tapering at both ends, one extremity is generally more blunt than the other, which would admit of its being inserted into a handle; though much larger it somewhat

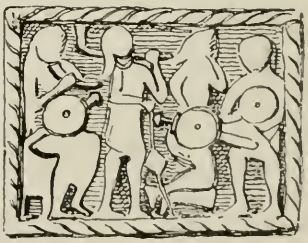


Fig. 133.
Figure, with sling, from the Cross of Monasterboice. (Christian Period.) From a Drawing by W. F. Wakeman.

resembles the first variety of arrow-heads. The flint-chisel, invariably formed from the hardest material, is brought to a sharp-rounded edge or segment of a circle at one extremity, the remainder of the object being left in a rough state; some are so short (fig. 135) that they would, for use, require to be inserted in a handle, whilst others could have been readily employed without such assistance. Many antiquarians have imagined that they were employed for skinning animals; others have suggested that they were employed as cutters and carvers of wood, bone, leather, or such like material; and the late E. T. Hardman observed that the stone-chisels employed by the Australian aborigines resemble the Irish form of the implements supposed to have been used in scraping and dressing skins, and he brought back specimens that were exactly similar to those found in the deposits at Ballintoy, and other sites on the north coast of Ireland. These Australian instruments could not be referred to such a use, as the natives go perfectly naked, and do not use the skins of animals as a protection from the weather. These chisels are often fastened with gum into a short handle (fig. 136), and are employed in making ornamental markings on their shields, and other wooden articles, so we may legitimately speculate on the possibility of the Irish aborigines having also used similar tools for like purposes.

Fig. 134.
Flint Pick. (One-third real size.)

Fig. 135.
Chisel, Thumb-flint, or Scraper. ($3\frac{1}{2}$ in. by $2\frac{1}{2}$ in.)

The stone chisel possesses, in general, irregular side edges, with a square top which, in some examples, bears evidence of the effects of hammering. Though implements of this class have been styled chisels, they could have been utilized as axes, either for industrial or for warlike purposes. Many specimens were found when deepening the fords of the river Shannon; the greater portion have straight cutting edges; some are curvilinear, whilst others are hatchet-shaped as well on the sides as on the edges.

Stone hatchets, by some antiquaries styled celts, are widely distributed implements, being found in every quarter of the globe which had been inhabited by man; and their general contour varies but little. The term 'celt' may be described as very misleading: it is derived from the Latin word 'celtis,' signifying a chisel; perhaps the designation 'stone-hatchet,' or 'axe,' would better describe the kind of work for which they were more specially adapted.

Fig. 136.

Mode of fastening a Chisel, Thumb-flint, or Scraper, as practised by the Aborigines of Western Australia. (Full size.)

The best examples are formed of pure felstone, pale-bluish, or grayish-green in colour; next comes metallic basalt, tough and heavy, but not affording so good a cutting edge as felstone; there are also many examples of porphyry, syenite, and greenstone. Hatchets have been found of materials foreign to the district; Antrim flint has been worked into implements in the West of Ireland. The late E. T. Hardman drew attention to the fact, that the natives of Western

Australia carry on a regular system of barter between different tribes, even when hostile, for materials from which to form weapons and ornaments. Thus there is an interchange according to the natural products of the districts of flint and basalt, or spinifex gum, or, a most important matter, red ochre, and white pipe-clay, for ornamentation of their bodies at great festivals; and this commerce occurs between tribes more than a hundred miles distant from each other. This present-day custom may throw some light on the fact that implements of Antrim flint are found in the West of Ireland, and that hatchets formed of stone foreign to the soil, are of frequent occurrence; but of hatchets formed of materials which are not at present known to exist in Ireland, few examples have been recorded, one is merely a fractured portion of a flat, fish-tailed hatchet, in the collection of the Royal Irish Academy, showing a greenish-white crystalline surface; the stone of which it is composed is not known as Irish and is not common anywhere, yet it is very doubtful if this specimen be an imported article.

Jade has been described as 'an old-world mineral,' and objects, found in Europe, formed of this material, are ascribed to an oriental source. Axes of jade are rare, yet they have, from time to time, been brought to light. One specimen has been recorded as discovered in Cornwall, and their presence in Ireland, in small numbers, is unquestionable, but the manner and period of their transport thither, and their connexion with the place of their discovery, are questions yet to be determined. An axe in the collection of the late Canon Mac Ilwaine is described as an implement of jade of the finest description; in colour it is of a rich green, translucent when held to the light, 'harder than steel, and

capable of marking the surface of glass.' Another implement is in the Petrie Collection.

Both these specimens, however, are, it is stated, of doubtful origin. The probabilities appear to be that the former may have been found in Ireland; the latter is alleged to be from New Zealand.

About the year 1865 an undoubted jade-axe was found by a labourer whilst working in a field on the headland of Rathmore, near Portrush, county Antrim. Its discovery is well authenticated. The date of its importation into Ireland is, it would appear, alone open to argument. Canon Greenwell and Sir John Evans were of opinion that it was of New Zealand type and material. The presence in Ireland of manufactured jade, involves us 'in a dense thicket of problems,' one of them being, that these objects may have been imported into Western Europe from the East by a primitive race.

G. H. Kinahan remarks that there are three kinds of rocks called jade:—'First, *Nephrite*, which for the most part is compact, fine-grained tremolite; second, the Swiss Alps' jade, or *Saussurite*, which is a compact epidote; and third, *Jadeite*, or China jade. The first is the stone used in Turkey to make into handles for swords and daggers; whilst in New Zealand and other Pacific islands it is fashioned into celts, clubs, &c.; and in Mexico and Peru into carved ornaments. The rock of the second class is not recorded as having been used for celts, &c., yet it is strongly suspected that some of the implements in the Royal Irish Academy are varieties of *saussurite*. The third rock, the *feit sui* of the Chinese, is (according to Fellenberg) the jade principally found in the Swiss lake-dwellings. *Tremolite* is not uncommon in some of the metamorphic rocks of

Galway, Mayo, Donegal, Derry, and Tyrone. . . . Some of the *tremolite*, of a pale-green colour, from Cannavar island, Lough Corrib, is closely allied to *nephrite*. . . . *Saussurite* has been found in England and Scotland and of late years it has been recorded from Ireland.'

It is quite within the bounds of probability that as the study of geology is entered into with more minutiæ many localities, at present supposed to be devoid of jade-bearing rocks, may be brought under notice, and the prevalent beliefs about the restricted area in which true jade is found will be modified, and the inferences therefrom deducted will be corrected. Serpentine, which often resembles jade, is found in the county Sligo, but it is very soft in comparison with real jade.

The most common variety of stone-hatchet is similar in outline to that of the mussel-shell. The middle of the implement swells into an oval form, tapering to a more or less rounded point; while the general contour is preserved, the shape is modified by the description of stone of which the axe is formed.

In average size this class of implements varies from six to eight inches in length, and from two to nearly four inches in breadth. In general contour and make they appear to have been formed for the purpose of giving a heavy cutting blow. The smaller examples may have been employed more as smoothing or polishing tools, as adzes or chisels, and as wedges; thus in varied forms acting as hatchet, chisel, plane, punch, wedge, and battle-axe. It is also alleged that it was originally a hand tool, afterwards converted to hatchet purposes (figs. 137–141).

Careful examination of incompleted specimens, probably either lost, or thrown aside by the worker

owing to some imperfection, conveys a good idea as to the various stages in their manufacture. In the North of Ireland they are commonly made of hard basalt, the rock of the district; for the stone of the country has formed the general material, and their construction was probably effected somewhat in the following manner. The beds of torrents, the sea-shore, or some such likely localities, were searched for water-worn stones

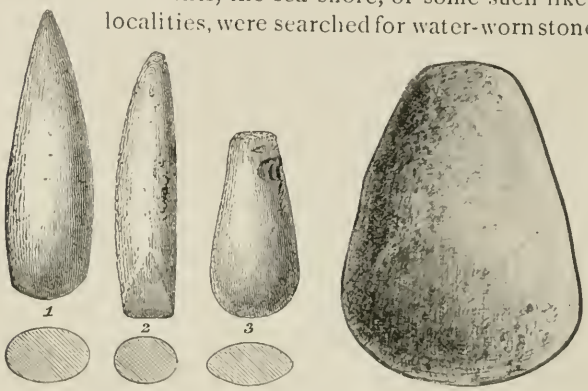


Fig. 137. Fig. 138. Fig. 139. Fig. 140.

STONE HATCHETS OR AXES. (Figs. 137–141.)

Fig. 137.—Hatchet or Axe of greenstone porphyry, 12 inches long, $3\frac{3}{8}$ inches broad. (One-eighth real size.)

Fig. 138.—Hatchet or Axe of fine grained sandstone, $11\frac{1}{4}$ inches long, $2\frac{1}{2}$ inches broad. (One-eighth real size.)

Fig. 139.—Hatchet or Axe of crystalline greenstone, $7\frac{1}{2}$ inches long, $3\frac{1}{4}$ inches broad. (One-eighth real size.)

Fig. 140.—Hatchet or Axe of flint, from a Lake-dwelling in Glencar, county Sligo. (Half real size.)

approaching as nearly as possible to the form required; the object selected appears to have been roughly worked into something approaching the required shape, then it was given its cutting edge, evidently to test the quality of the material which, if too soft or with flaws would then be discarded. The way in which they were

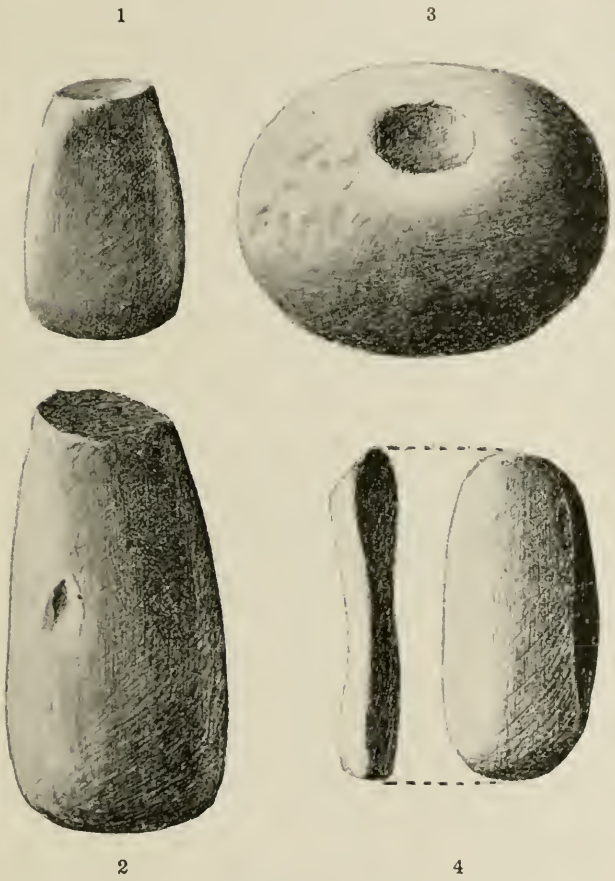


Fig. 141.

1 and 2, Basaitic Hatchets or Axes; 3, Indented Hammer of Sandstone; 4, Worked Hammer-like Stone. All probably used as hand-tools. From a Lake-dwelling in the county Roscommon. One-half real size.)

made has been suggested by the circumstance of a number of rudely blocked hatchets having been found together, in a heap on the bank of a small stream, and they appeared to have remained in the same place since the time they had been first formed.

In some instances the workman, being probably certain of the excellence of his material, the final grinding or setting of the edge appears to have been deferred until the article was finished and polished. In general, however, after the hatchet was roughly shaped, and had received its cutting-edge, it was then worn down along its length, by friction, into a number of faces, in the manner that a ship's carpenter planes a spar when reducing its size (fig. 142). The angles formed by this process

Fig. 142.—Axe of felstone, in process of fabrication, found unfinished in the county Derry. ($13\frac{1}{4}$ inches long, $3\frac{1}{4}$ broad.)

were worn down by oblique friction, and when smoothed throughout, the entire surface was generally polished. In some instances it equals that which would be accomplished by a stone-polisher of the present day. This, however, only applies to the very best specimens, and made of the hardest materials, for the vast majority are but roughly hewn.

Decorated stone-hatchets are rare; in one example in the collection of the Royal Irish Academy, the non-cutting end is perforated (fig. 143); in a few instances small spear-shaped or chisel-like implements have been found perforated, as if for the purpose of allowing a thong to be passed through the orifice.

A considerable number of stone-hatchets were discovered during the works carried out for improvement of the navigation of the river Shannon; but however valuable may be the large collection of these ancient relics, they cannot be cited in support of any theory with regard to the age of stone, nor can they render any assistance in forming an opinion as to the relative ages, or stages, of the Stone and Bronze Periods in Ireland. The collection was not made at one locality; on the contrary, it is an aggregate of a comparatively small selection from each of the various shoals that were deepened. The fact, however, of finding so large a collection in the river-bed confirms the idea of these hatchets having been used as weapons, perhaps between hostile hordes disputing the passage of the river. Instead of being found in regular layers, stone implements lowest, bronze next, and iron last; all appeared to have been deposited in inexplicable confusion, yet, according to an official connected with the 'Shannon Navigation' operations, and whose opinion on such a subject must carry weight, the manner in which these objects were mingled together is capable of easy explanation. The workmen at first made no note of the circumstances under which the various implements were found. There was also, except in one or two instances, in the shoals which were removed on the Shannon, nothing of a lacustrine or depository character, in which slow sedimentary deposits, continuing for a

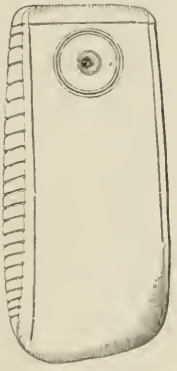


Fig. 143.
Decorated and perforated Stone Hatchet. (One-half real size.)

lengthened period, would mark a succession of eras, by which the relative age of the antiquities found in them might be approximately determined. On the contrary, nearly all the shoals consisted of hard limestone drift, composed of rounded gravel, combined with tenacious clay, forming a compact mass, which, from its cohesive character and tendency to unite again into the same compact state as before, after being disturbed or removed, is sometimes locally styled 'mortar gravel.' On a surface of this nature, weapons dropped during a long course of ages would naturally present an accumulation of implements of offence, of every description, and of every age.

Fig. 144.

Stone Axe discovered in the Co. Monaghan, with wooden handle, 13½ inches long, still attached.

We are not left to mere conjecture as to how some of the hatchets were hafted. Many years ago one was found still inserted in its handle, which was about fourteen inches in length, and the stone had been probably further secured by strong lashings of thongs (fig. 144); a similar handle, from which the hatchet had dropped, was discovered in a lake-dwelling at Kilnamaddoo (fig. 145). Although many other modes of hafting stone hatchets may have been employed, yet no example has come down to the present time; they may have been fitted into cleft sticks, or enclosed within the folds of several tough, but yet slender and pliable, branches, which were then tightly bound round with thongs of leather, much after the manner pointed out by E. T. Hardman as practised by the aborigines

of Western Australia (fig. 146). It is alleged that when a Breton peasant finds a stone-hatchet—there styled a 'thunder-stone'—he places it in the cleft of a growing branch, or sapling, and leaves it until the wood has formed and hardened round it. 'Can this superstition be the relic of a period when primitive man called upon Nature to act as carpenter? Time to a savage would not be of importance, but could he have patiently waited for the implement to be thus hafted?'

Fig. 145.

Wooden handle of Stone Hatchet found on the site of a Lake-dwelling. (One-eighth real size.)

Fig. 146.

Mode of hafting Stone Hatchet practised by the Aborigines of Western Australia. (About one-ninth real size.)

The stone hatchet* seems to have developed into a variety in which the handle was inserted into an aperture bored through the material. These, it is believed, were in use contemporaneously with iron, for as yet no bronze hatchet has been found pierced in this way for the reception of a handle. It may be laid down as an almost certainty that perforated

* The stone tomahawks of the natives of Western Australia are usually formed of fine-grained basalt, rudely chipped, but worked to a fine edge; the majority resemble the stone hatchets obtained in the neighbourhood of Lough Neagh. These may be described as (1) chipped and rough-hewn stone axes; (2) same as (1), but ground and polished at the edge; (3) same as (1), but ground and polished over the entire surface.

stone hammers belong to a metallic age; three characteristic examples are here given (figs. 147, 148, 149). In stone-hatchets the hole appears to have been produced by a preliminary process of chipping and punching on both sides of the object, leaving the edge of the aperture splayed, then deepened by rotatory friction with another hard substance, and the use of sand and

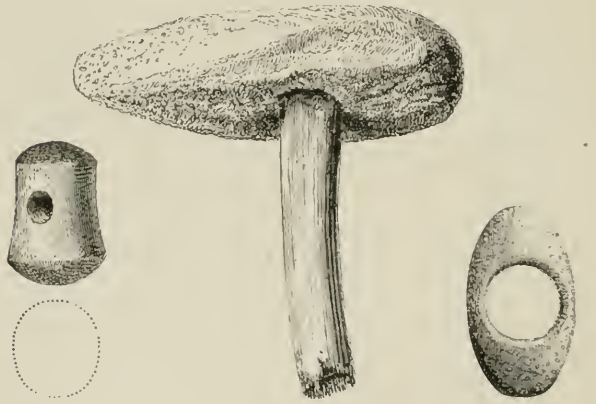


Fig. 147. Fig. 148. Fig. 149.

STONE HAMMERS (Figs. 147–149.)

Fig. 147.—Mallet formed of gneiss. (One-fourth real size.)
Fig. 148.—Hammer of coarse hornblende-greenstone, recently in use. (One-fifth real size.)
Fig. 149.—Pierced Stone; may have been used as a weight. (One-fourth real size.)

water. The latest examples appear to have been perforated by the aid of metallic tools; the sides of the aperture are cylindrical, and in some instances the circular markings left by the tool are still observable. Thus from the rudest palæolithic flint-flake to the flint-axe and kindred implements, and the highly finished and polished weapons of later times, the age of metal

is reached through an uninterrupted progressive series of advances, of which each link can be distinctly traced.

It may be well to describe some implements which, though formed of stone, yet all, or almost all, belong probably to the metallic age.

Punches of stone, some of them carefully wrought, are conical, or wedge-shaped, and vary in section from round to oval. The head bears evidence of hammering (fig. 150), whilst the lower portion is usually smooth, and is either round, or formed into a chisel-shaped edge. Many are grooved just underneath the head, round which was probably twisted a flexible attachment, which held it in place whilst the hammer was applied.

Fig. 150.
Punch of grey quartz 6½ inches high by 5¾ broad. From Ross Island.

A punch of close-grained mottled hornblende, finely polished, and of a form of somewhat rare occurrence in Ireland, was found at Kilcully, near Cork, during the summer of 1878. It possesses a wedge-shaped cutting edge; the flat surface of the head bears marks of use, and immediately beneath it is a finely-polished and deeply cut groove to retain a ligature enabling the person using it to keep it in the desired position.

Chisels of stone are not uncommon. In general they have angular side-edges, with a square top, which frequently bears evidence of hammering. The cutting-edge is straight, and does not present, as in the stone hatchet, the segment of a circle; a few, however, are thus shaped, and some, though flat, follow the shape of the stone-hatchet. It is thought that these, owing to

their form, must have been used as hand-chisels, or they may have been attached to a handle, and used as an axe.

Oval pebbles of quartzite, with a score, varying in depth, along one or both faces of the stone, are frequently found. Their use is somewhat doubtful; the best English and Scotch antiquarians regard them as 'whetstones,' or 'point-sharpeners' (fig. 151); in the north of Ireland they are styled 'tracked-stones.' Their distribution is considered to be characteristic of Sweden, Denmark, the northern extremity of Scotland, and the north of Ireland. Among Irish examples, some have abraded ends, showing that they had been used also as hammer-stones. They are generally found by farmers while cultivating their fields. The large whetstone (fig. 152) was found on the site of a lake-dwelling in the island of Achill, and bears

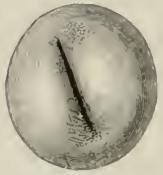


Fig. 151.
Quartz Pebble, supposed to have been used as a point sharpener or whetstone for metallic tools. (One-third real size.)

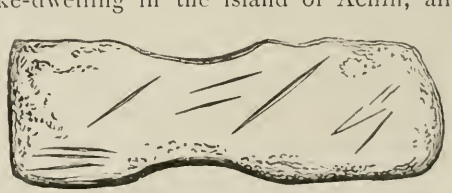


Fig. 152.—Whetstone of the Metallic Age, with markings resembling those on fig. 151. (One-ninth real size.)

deep and sharp indendations, produced by the edges and points of metallic tools. These indentations, though larger, yet resemble those usually to be observed on 'tracked stones.'

Sink-stones, used for either fishing-lines or nets, are by no means rare, and quoit-like discs of sandstone, pierced with a hole to attach them to the bottom rope of a net, are not uncommon. They may be of any age; even in the present day, in remote localities, they may

STONE WEIGHTS. (Figs. 153–156.)

Fig. 153.—Ring of sandstone, probably used as a sink-stone for a net. (About one-third real size.)

be seen in use. Figure 153 is a ring formed out of a piece of sandstone, $4\frac{1}{2}$ inches in diameter. It was found on the site of a lake-dwelling in Glencar, county Sligo. Figures 154, 155, and 156, though considered by some

antiquaries to have been used also as net-weights, were, with more degree of probability, employed in weaving.

Fig. 154.

Fig. 155.

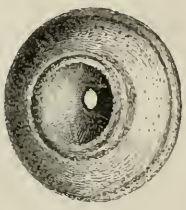


Fig. 156.

Fig. 154.—Weight of sandstone, probably used in weaving. (One-fourth real size.)

Fig. 155.—Weight of soft white sandstone, probably used in weaving. (One-fourth real size.)

Fig. 156.—Weight of sandstone, probably used in weaving. (One-fifth real size.

All are of the metallic age. Figure 156 was turned in a lathe. Figure 157 represents a stone disc, pierced through the centre, and bearing on one side an arrow-like indentation. Whether it was used as a weight or as the superior portion of a mould for casting arrow-heads is open to conjecture. It is from a crannog near Nobber. A very similar object to figure 156, but made from the crown of a stag's horn polished on the interior, was found on the site of a lake-dwelling at Cloonfinlough (fig. 158).

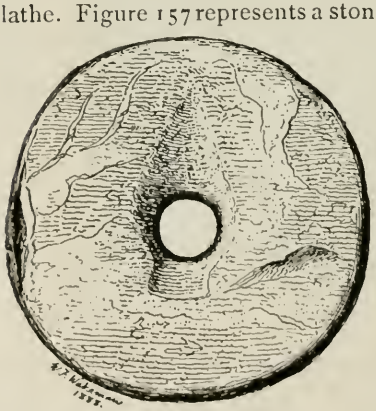


Fig. 157.

Stone Disc, pierced in centre, and bearing an arrow-like indentation. (One-half real size.)

Figure 159 is a curiously-shaped bone ring, yellowish white in colour, and formed from the vertebra of some animal. The lightness of these two last articles demonstrates that they could not have been utilised as net-sinkers.

Fig. 158.

Fig. 159.

Fig. 158.—Object made from the crown of a stag's horn. (One-third real size.)

Fig. 159.—Bone-ring, formed from the vertebra of some animal. From a Lake-dwelling. (One-half real size.)

It cannot be doubted that in a few instances the round or oval stones, designated 'hammer-stones,' have been artificially worked, but the great majority must be looked upon simply as water-worn pebbles that have been thus utilized. Many of the egg-shaped specimens are more or less frayed, or chipped, at their extremities; a large, flat, worked-stone implement, with circular termination, rough sides, and polished edges, was found in the lake-dwelling of the 'Miracles,' county Fermanagh; its flat end showed marks of wear, as if used for a pounding instrument (fig. 160). A stone exactly similar was found in the 'midden' at Ardnahue, county Carlow; it had all

Fig. 160.
Stone Implement from the Lake-dwelling of The Miracles. (About one-fifth real size.)

the appearance of having been grasped in the hand for use, as the edges were polished from constant friction.

Fig. 161.

Dagger-like Implement of cetaceous bone. (About one-seventh real size.)

Implements of horn and bone appear to have been used in Ireland contemporaneously with the use of flint and stone, but probably, owing to their less durable nature, comparatively very few articles of this kind have survived. The following is of indubitable antiquity :— A sword or stabbing-rapier, of cetaceous bone—the fragments of which demonstrated its original length to have been about 2 feet—was dug up in one of the Carrowmore rude-stone monuments near Sligo (fig. 161). There can be no doubt regarding the material of which both it, and other similar but smaller implements found in the same locality, were composed, as microscopic sections of the substance were prepared. These rapiers were probably formed from bones of the Greenland whale, drifted ashore on the coast; such events do occur, although at rare intervals, for the North Cape whale used to frequent, in the winter months, the coasts of Europe, from the Mediterranean, to the sea north of Norway, as far as Behring Island.

Remains of cetaceous bone were also found in the sepulchral chambers of the Loughcrew carns.

The horns of deer formed tools and weapons, as well as handles for various implements. Fragments of horn,

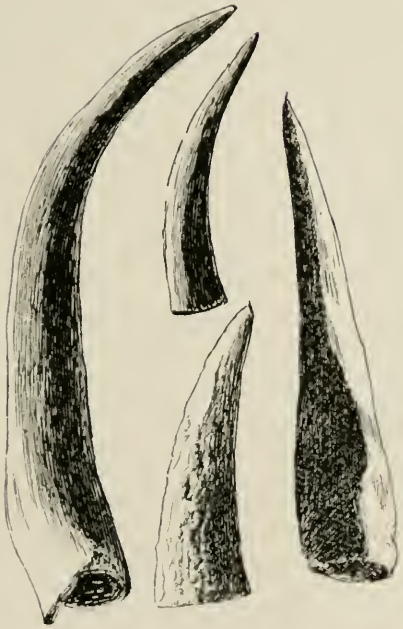


FIG. 161 A.

Tips of deers' horns, hollowed at the base, and artificially pointed, probably used as spear-heads. (Half real size.)

From lake-dwellings in the West of Ireland.

which would appear to have been used as picks or hammers, are not unfrequently discovered, and the tips of deer's horn sawn off are found in quantities, as if collected for a specific purpose ; some are hollowed at the base, and frequently bear marks of having been artificially pointed ; they may have been used as javelin- or spear-heads, or as daggers.

A fine example of an axe-head of bone was found on an ancient wooden causeway. The sharp cutting edge of the small extremity was formed by breaking or cutting off the material obliquely ; the larger extremity was pierced for reception of a handle (fig. 162). Knives of bone may have been used indifferently as weapons, tools, or food implements ; the class of so-called 'scoops' may have been also utilized as daggers or spear-heads.

Fig. 162.

Axe formed of bone, 8 inches in length, found in Ballykillen Bog, King's County.

Arrow-heads of bone are comparatively rare ; one formed of the split bone of a large mammal was found in the county Sligo in one of the Carrowmore rude-stone monuments; the convex and concave sides of the median canal were very observable ; another was discovered on the site of one of the lake-dwellings in Lough Talt, and a third on a crannog site, in Lough Gill, in the same county.

Another class of implements of a slightly larger type are of more common occurrence. They are formed from the long bones of animals, fractured obliquely, and then ground on a stone ; they were thus rudely fashioned into weapons, and advantage being taken of

the central cavity, they were probably attached to the extremity of a wooden shaft, and used as dart- or javelin-heads.

Even wood appears to have been occasionally employed for implements of warfare or of the chase. A wooden sword was discovered at Inver, county Donegal (fig. 163), whilst a large collection of 'skewer-like' pieces of wood, called 'arrows' by the peasantry, were found in a bog on the top of the mountain of Coumanare, county Kerry. They were scattered about the broken and weather-beaten parts of the moor, strewn over an area of about a quarter of an acre. A few which remained apparently in their original position were about 3 feet below the present surface; nearly 300 of these strange implements were collected.

Fig. 163. Fragment of Wooden Sword, 27½ inches long, found on the site of a Lake-dwelling.

In the townland of Coolnaman, parish of Aghadowney, county Derry, a curious antique wooden implement was discovered embedded in a turf-bog, at a depth of 4 feet from the surface, supposed to occupy the site of an ancient lake. This is the first specimen of its class discovered in Ireland, but very similar implements have been brought to light in Wales, Germany, and Italy, apparently always on sites formerly covered by water; it is therefore assumed, with some degree of probability, that they were traps for capturing beavers, otters, or fish. They are found, however, where beavers are supposed never to have existed, and the habits of otters

in feeding render it unlikely that they could be caught in such traps; but one can understand large pike, or other fish, so captured. The implement could be either baited and used as a float, to kill the fish by its buoyancy, or used as an 'otter'—as the extremely poaching but very effective implement for capturing fish in the present day is termed—worked from a boat or the lake-shore on the principle that a kite is flown in the air by a boy on the ground. The 'otter' theory presents the

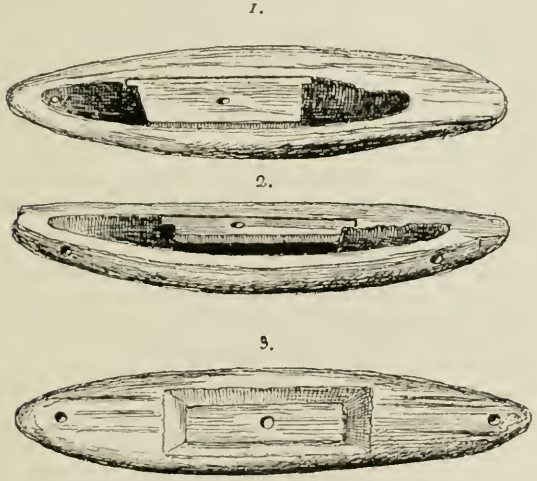


Fig. 164.—Wooden Implement, supposed to have been employed for piscatory purposes. 1. Top view; 2. Side Elevation, with lid partially open 3. Bottom view.

greater degree of probability and simplicity, and meets the circumstances of the case, inasmuch as fish are found in mostly every lake. The Irish specimen (fig. 164) is described as about 3½ feet in length, 7½ inches across the centre, and 2½ inches in depth. The lid is

14 inches long and $3\frac{1}{2}$ inches broad; under hole, $12\frac{3}{4}$ inches long and $3\frac{1}{2}$ inches broad.*

Another very similar object was found by turf-cutters about the year 1886, in a bog at Clonetrace, near Broughshane, Co. Antrim. It was sold by a dealer in antiquities to the late Canon Grainger, as an old 'otter for fishing with.'

Besides the varied implements of war and of the chase there is also a numerous class formed of stone, as also of bone and wood, which were apparently employed for domestic purposes. Very frequently there have been found in the bogs of Ireland wooden vessels filled with butter, in a hardened state, and quite free from putrefaction; specimens of these utensils and their contents are to be seen in almost all museums. In some cases the butter occurs in balls, either with or without external covering, but it is more generally found in single-piece wooden vessels (fig. 165).

Fig. 165.
Remains of a Single-piece Barrel, formed of sallow, enclosing bog-butter. 26 ins. high.

For beasts of burden the yoke was in use from an early age, but any that have been hitherto discovered, whether double or single, appear too small for cattle of species still existent; however, the old race of domesticated kine in Ireland were doubtless smaller in size than those of the present day. It was not until a comparatively late period that the attention of antiquaries was directed towards this class of remains, usually found

* *Ulster Journal of Archæology*, vol. vii., p. 165.

covered by a considerable depth of bog. A good idea of their general appearance is conveyed by the accompanying illustration (fig. 166). Nos. 1 and 2 were discovered under 18 feet of peat at Donagh, county Monaghan. Nos. 3 and 4 represent yokes found deeply buried in a bog abutting on Lough Erne. Nos. 5 and 6 are specimens curiously twisted and split, the result of drying. Some antiquaries imagine these articles were employed for yoking together prisoners taken in warfare.

The inference may be fairly drawn that the comparatively few implements of bone still extant were fabricated by a people to whom flint, and even bronze and iron, were known, but by whom such materials were not always attainable, and who preferred the use, especially in the chase, of weapons which could, if lost, easily be replaced by materials at hand; this is exemplified by the fact of finding on the sites of lake-dwellings, bone, flint, bronze, and iron objects which have evidently been in contemporaneous use. Figure 166A is a small spoon-shaped vessel formed from the vertebra of some large mammal.

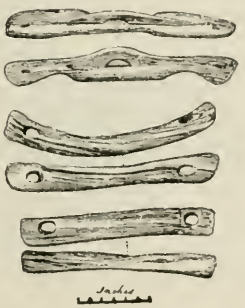


Fig. 166.
Wooden Yokes, found in Donagh Bog, and on the margin of Lough Erne.

The rough bowls or hollows, sometimes found in unhewn stones in old churchyards, are designated 'bullauns' by the peasantry, and are generally by antiquarians held to be very rude, but very ancient fonts; others hold that they were rude mortars, in which the priests living in connection with, and often

inside such churches, had ground their corn for food. If even the stones be taken as belonging to the earliest period of Christianity, they are so extremely rude that there is difficulty in believing them to have been used as fonts; the hollows, also, are too small to have served for total immersion, whilst the 'bullauns' were, from their depth and small size, ill-fitted for mortars.

There is a very Pagan aspect about this class of ancient remains, and they are just as frequently to be met with in localities which have never possessed a church or Christian cemetery. They are found upon the face, or the nearly perpendicular side of natural rock, as well as upon boulders, in caves natural or artificial, in the chambers of Pagan sepulchral mounds, upon the shores of lakes, the banks of rivers, in the deep recess of a glen, or on the summit of a mountain; so that it is quite as possible that often the Christian Church was erected in the locality because the 'bullauns' were there, that it was a Pagan place of worship, or thickly inhabited spot, as that the bullaun is a necessary adjunct of a primitive ecclesiastical edifice.

Fig. 166A.
Spoon-shaped Vessel, formed of bone.
(Two-thirds real size.)

The 'nine-hole stone' at Meelehans, about three miles from Tullamore, is a limestone boulder, close-grained and fossiliferous; its southern edge is depressed about 10 inches lower than its northern; the earth is removed from its surface in a circle of 6 feet diameter, and on this naturally even face circular basins are cut. Four measure 1 foot each; two are of lesser dimensions.

The formation of a seventh was only commenced. The others are natural depressions, barely discernible. The basins are seldom or never without being nearly filled with water; for the incline of the stone, and the drip from the surrounding green sward throw so much into them at each rainfall as the evaporation of dry intervals is unable to exhaust. At some yards' distance there is another stone nine feet long; its breadth and depth each about one-third of its length. Its eastern side and upper surface are exposed, its northern end is lowest.

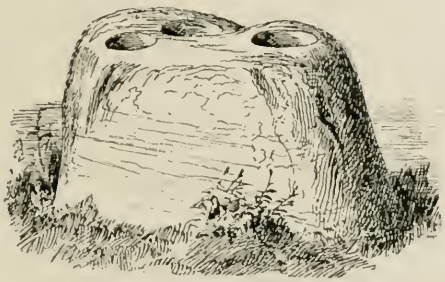


Fig. 167.

Boulder Stone, with bullauns. Height, 3 feet; circumference at base, 19 feet. From a Drawing by W. F. Wakeman.

It possesses but one basin, which is near its south end, and measures fourteen inches in diameter, and six inches in depth. The material in which it is hollowed is calpy limestone, and being fissured no water lodges in the basin.

There is a natural boulder close to the old church of Templenaffrin, or the church of the Mass, near Belcoo, Co. Fermanagh, on the top of which are three well-defined bullauns (fig. 167). The water—as natural in

a moist climate—almost invariably to be found in the hollows of bullauns, is very generally supposed by the peasantry to possess miraculous curative powers, especially in diseases affecting the eye, and it also is regarded as an infallible remedy for the removal of warts. 'It has been explained by a medical gentleman of great experience,' writes W. F. Wakeman, 'that water thus found being, as a rule, highly acidulated by the decomposition of vegetable matter, when applied to eyes, or rather eye-lids, affected by certain forms of irritation, may, not unfrequently, alleviate discomfort, and even effect a cure.' The same superstition prevails in connexion with the water of many of our 'holy-water' fonts, 'holy wells,' and even of many lakes.

Grain-rubbers for crushing and grinding corn, roots, or other articles of food, are the most primitive implements used by the early inhabitants in the manufacture of food. A grain-rubber consisted of a stone flat on its upper surface, and which was slightly hollowed so as to hold the article required to be ground. Into this fitted a convex rubber, or upper stone, which was passed backwards and forwards by manual labour, and thus bruised and ground to powder the objects beneath.

A naturally round or oval-shaped stone used for pounding or grinding corn or roots in a hollow-shaped depression in a slab or rock appears to have been universally the first attempt of primitive man to form a mill. In a recent work by Adolf Erman on *Life in Ancient Egypt* there is a representation of a statuette from Gizah of a woman crushing corn on one of these saddle querns, and in the same state of nature in which Fynes Moryson describes 'young maides stark naked, grinding corn with certain stones, to make cakes thereof.' Captain Cuellar, an officer belonging to the

Spanish Armada, states that women, when at work indoors, were in a state of nature.*

Figure 168 represents a stone grain rubber, complete, found 15 feet deep, in a bog, between Enniskillen and Lisbellaw, county Fermanagh. It is over 2 feet in length by 1 foot in breadth.

Fig. 168.

Stone Grain Rubber, over 2 feet in length by 1 foot in breadth.

Figure 169 represents another grain rubber of a more advanced type, provided with a discharge hole.

Hand-mills, in Ireland called querns, were the next progressive advance in the art of manufacturing grain. A quern is evidently the primitive kind of mill referred to in the Scriptures, where it is said, 'Two women shall be grinding at the mill,' as the upper stone in this hand-mill was turned with the help of one or more wooden handles. In *A Midsummer-Night's Dream* Shakspeare makes Puck to 'sometimes labour in the quern.' The implement is denominated 'bro'; and this word occurs in

Fig. 169.

Grain Rubber, with discharge hole. (About one-tenth real size.)

* On an island off the west coast of Ireland, a monastery was founded by St. Fechin in the seventh century, for the conversion of the inhabitants who were then pagans. Cambrensis afterwards describes them as 'homines nudi, qui non sciverunt nisi carnes et pisces; qui non fuerunt Christiani, nec audiverunt unquam de Christo.'

Proverbs in the signification of 'to grind'—'Though thou shouldst bray a fool in a mortar among wheat with a pestle, yet will not his foolishness depart from him.'

The upper stone (A) of figure 170 is about 22 inches in diameter; its under surface considerably concaved. The lower stone (B) was convexed, so that an easy descent was afforded for the meal (E) when ground. In the centre of this upper stone was a circular hole nearly 3 inches in diameter, and through it the quern was 'fed' (as it is called), *i.e.* supplied with fresh corn (EEE) as fast as the bran and flour fell from the sides of the machine. Within about 2 inches of the edge was set an upright wooden handle (D) for moving the upper stone, which rested in equilibrio in a strong peg or pivot (C) in the centre of the lower stone. There were generally two women employed in the operation; they sat on the ground facing each other, the quern between. One of them, with her right hand, pushed the handle to the woman opposite, who again sent it to her companion, and in this manner a rapid rotatory motion was communicated to the upper stone, whilst the left hand of the operator was engaged in the 'feeding' process.

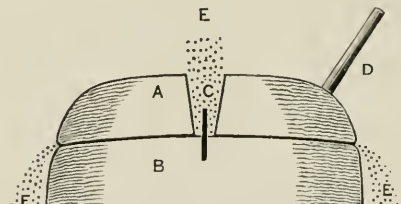


Fig. 170.

Section of ordinary Quern, or Hand-mill. (About one-fourteenth real size.)

Although employed in comparatively very ancient times, yet in remote localities querns continue to be used to the present day, and are too well known to require further description; but something must be said of what are styled 'fairy mill-stones' by the country-

people. This class of objects—of common occurrence in archæological collections—is found in great abundance, particularly in the North of Ireland. They consist of small flat circular stones, generally about an inch and a-half in diameter, and about a quarter of an inch thick, pierced in the centre with a small hole. Some specimens are much larger, being nearly three inches in diameter. By most antiquaries they are considered to have been 'whorls,' and to have been used for spinning.

The distaff and spindle, though in use in many parts of the country until quite recently, date back to the

Fig. 171.

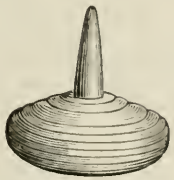


Fig. 172.

Figs. 171 and 172.—Spindle-whorls of bone, with portion of Spindle still in position. From the Lake-dwelling of Lagore. (One-half real size.)

earliest times. In spinning the rotary motion of the spindle is maintained by the 'whorl,' which acts as a diminutive fly-wheel. Whorls were very generally formed of stone, but also of bone, with a perforation in the centre, in which the spindle was fastened, and below the whorl it tapered to a point to facilitate its being twisted between the thumb and forefinger. The superior portion of the spindle, of greater length, was also pointed, to allow of the thread, when spun, being wound round it. Several whorls have been found with the entire or greater portion of the spindle still in place (figs. 171, 172). Whorls have been found in almost every locality, in raths, cashels, sea-shore settlements

but principally in the refuse-heaps of lake-dwellings (figs. 173, 174). The art of spinning, being of a sedentary nature, was exclusively allotted to women, which is supposed to explain the fact of such a number of whorls being found on the sites of crannogs, where this peaceful occupation was carried on. In the present day the province of Ulster seems to have monopolized an industry that may be traced back to ancient days.

Figure 175 represents some whorls slightly less than full size. Nos. 7, 8, 9, 11 are of stone: the remainder

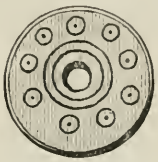


Fig. 173.

Fig. 174.

Fig. 173.—Ornamented Whorl of bone from the Lake-dwelling of Lagore. (One-half real size.)

Fig. 174.—Ornamented Whorl of bone from the Lake-dwelling of Ardakillen. (One-half real size.)

are formed of bone; 10, 12, and 13 are apparently small beads. All these objects were found in lake-dwellings in the counties of Sligo or Roscommon.

Some earthenware spindle-whorls from the lake dwellings of Möringen, in Switzerland, are exactly the shape of the sea-urchin, or Echinus, and it is a curious fact that during explorations in the locality two recent specimens of this shell were found, which may have been used as models by the potter, and attention is directed to figure 106, p. 338, which was evidently shaped after the same model.

All evidence seems to denote that we had in Ireland the same early race of Palaeolithic and Neolithic folk

that occupied Britain and western Europe. Professor Boyd Dawkins is of opinion that 'at one period in the Neolithic Age the population of Europe west of the Rhine and north of the Alps was uniform in physique,

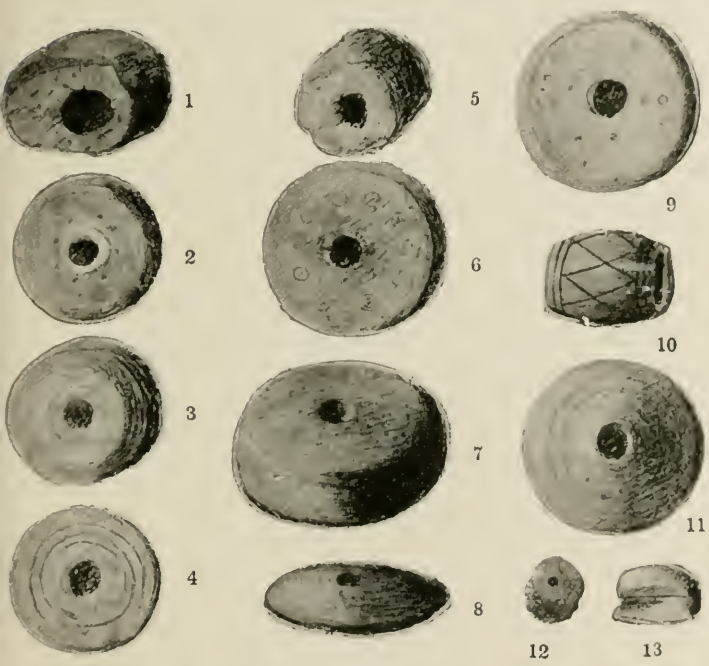


Fig. 175.—Spindle Whorls and Beads from Lake Dwellings in the West of Ireland. (Three-fourths real size.)

and consisted of the same small people as the Neolithic inhabitants of Britain and Ireland'; and if further proof were necessary to show that Ireland 'is not an exception in the matter of a stone age, we have the implements

themselves, as numerous and as varied as those of any other country or district of the same extent in Great Britain or western Europe.' The fanciful accounts by early Irish writers of the threefold invasion of Ireland by Firbolgs, Tuatha de Dananns, and Milesians may be merely vague traditions, put into concrete form, of various waves of population pressing westward across the Continent, until the latest broke on the shores of Ireland. First, the almost naked savage and cave-dweller, succeeded by another race, who used better-fashioned stone weapons, and kept domesticated animals; in their turn they gave way to a larger, stronger, and bronze-armed people.

There is now, in fact, a pretty general consensus of opinion amongst scientific authorities that man has been an inhabitant of this earth from an earlier period than it was at one time considered orthodox to believe. Some hold that, though his presence is of great antiquity, yet his arrival on the scene is merely post-glacial; whilst the more advanced ascribe to him an inter-glacial and even pre-glacial existence.

CHAPTER X.

BRONZE IMPLEMENTS, WEAPONS — STONE MOULDS — BRONZE FASTENERS, CALDRONS, SHIELDS, LAMPS, MUSICAL INSTRUMENTS.

METALLURGIC ART undoubtedly existed at an early period amongst the primitive inhabitants of Ireland, but it has not yet been decided when they first discovered the use of copper, and the art of working and casting it. Some archæologists assert that metal was introduced by a different race of men from those that employed stone; but this theory does not seem to adapt itself to the stages of metal work in Ireland, where the earliest metallic weapons are of the rudest forms, being seemingly copies in metal of the stone article previously in use; yet few implements of pure copper have been preserved, and these appear, in general, to be hatchets of the most primitive type. Two reasons may be assigned for the scarcity of articles of pure copper. The arts of working, alloying, and hardening the metal may have been coevally introduced from the Continent, or, after improvement, in the art of metallurgy, most of the old implements may have been re-cast and converted into bronze. It is stated that the Irish name for copper is a pure Celtic word *umha*, whilst the native designations for gold, silver, and iron, appear to be of foreign origin: the two first being derived from the Latin, and the latter probably from the Norse or Saxon.

The soft nature of pure copper was corrected by the admixture of tin. These, together with a minute quantity of lead, constituted the component parts of most of the bronze articles found in Ireland. Tin-stone or native oxide of tin is found in small quantities in the sand and gravel of rivers in Wicklow, and appears there, as in other countries, curiously associated with gold. Tin has also been found in the county Kerry and other localities; owing, however, to the small quantities in which it is present, it is—as a marketable commodity—practically useless. This important mineral is (according to G. H. Kinahan) recorded as occurring 'with lead and zinc in a lode in Dalkey, county Dublin. It also occurs in "the black sand" with the gold in the diluvial workings in "placer mines," county Wicklow, but no lode of it has been discovered in that county.'

Nine parts of copper to one part of tin are the constituents of the most serviceable bronze, and analysis of various ancient bronzes tends to confirm the value of this proportion; which, however, can be even better arrived at from other premises, *i.e.* that certain forms of bronze weapons, instruments, and utensils are, judging by their component parts, of much later date than others. In sixteen specimens of antique bronze — submitted for the purpose of analysis—the amount of tin varied from one to nearly fourteen per cent.; there did not appear to have been any fixed proportion of alloy: in some examples small quantities of lead were discernible, but in other articles, probably of late bronze manufacture, it was more largely used. A collection of antiques found at Dowris, in the King's County, were formed of a beautiful description of bronze, having a peculiar golden hue, owing, as supposed, to the admixture of a certain portion of lead. This kind

of metal has received the designation of 'Dowris bronze.' In the Late Bronze Period, zinc, in small quantities, was, it is stated, mixed with copper in the manufacture of the beautiful culinary utensils of these times.

To judge from the number of ancient excavations, from time to time brought to light, a spirit of mining enterprise must have prevailed amongst the inhabitants of the country at a very remote period. Antique tools, hammers, chisels of stone, and wooden shovels, have been found in these workings, and in some of them implements of iron also, so that these mines would appear to be of every age. In an ancient copper mine in the county Cork, the borings were filled with the rubbish of old workings, and some singular as well as primitive tools were found, together with a number of 'rolled stones,' almost all of which exhibited marks as if they had been used as hammers; a beam of oak, about twenty feet in length, and notched along the sides, suggested its use as a ladder. The rubbish found near the mouth of the mine was covered by several feet of naturally formed peat. Old copper-workings were discovered at Muckross, in Kerry, at Derricarhoon, in Cork, and a lead mine at Milltown, county Clare. In the year 1854, a gentleman, having taken shelter from a heavy shower in a small cave on the slope of the hill of Ballyrizard, county Cork, was struck by the strange appearance of the place. He employed labourers to explore the recess. On clearing out the place a chamber about twelve feet square was discovered. Here amongst the *débris*, several bits of copper ore were found, and in one corner, twelve stone axes, all much chipped at the edge. This discovery denoted ancient mining operations. An examination

was made of the surrounding farm, on which were found ten or twelve small parallel loads of copper ore.

When copper became known to the ancient inhabitants, the type of the primitive stone hatchet was reproduced in the metallic weapon, for proportionate to its size, the copper hatchet is usually more thick and rough on the surface than that of bronze, and it is generally smoother on one side than on the other. These copper implements are usually undecorated; some of them are six inches long by about four wide.

It was gradually perceived by the old craftsmen that a lesser quantity of copper possessed more toughness than an equal amount of flint or stone; the metal was therefore economised by flattening the sides

Fig. 176.

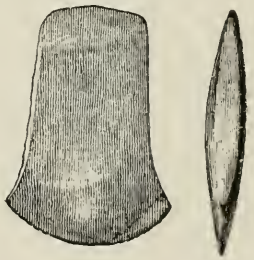


Fig. 177.

Simple Flat Hatchets. (Figs. 176-179.)

Fig. 176.—Flat Hatchet of pure copper. (One-half real size.)
Fig. 177.—Flat Hatchet of pure copper. (One-half real size.)

of the weapon; as skill increased, the aim of the fabricator appears to have been concentrated in forming the largest possible weapon with the minimum expenditure of metal, and this principle of design pervades the construction of the entire series of bronze weapons.

Although the bronze hatchet presents many varieties

of form, yet these may be divided into three classes or types, each being a distinct stage in its development:—

The first is *the simple flat hatchet;* the second *the winged or flanged hatchet;* the third is *the socketed hatchet.* These three classes merge one into the other through intermediate connecting links.

(1). *Simple flat hatchets* do not differ much in contour; some of the largest measure nearly thirteen inches in length

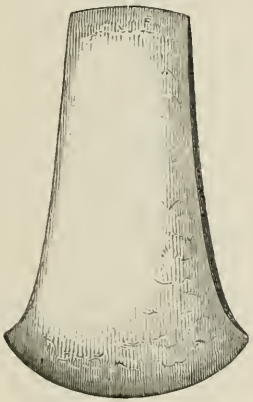


Fig. 178.

Fig. 179.

Fig. 178 —Flat Hatchet of pure copper. (One-third real size.)
Fig. 179.—Flat Hatchet of bronze. (One-third real size.)

by almost nine in breadth at the widest part; some are ornamented, but most are plain.

Figure 176 represents a flat hatchet of pure copper; it is only $\frac{6}{16}$th of an inch across the thickest part, and tapers to the edge all round. Figure 177, also of pure copper, was found at Ballinamallard, county Fermanagh. Figure 178, 6 inches long, and $3\frac{3}{4}$ wide across the broad, sharp-cutting edge, was found in the county

Waterford. Figure 179 is 7 inches in extreme length, and $3\frac{1}{2}$ inches across in the widest part.

Figures 180 and 181 represent two flat hatchets, elaborately ornamented. The illustrations show the two sides of each specimen. Flaws and irregularities in the designs and on the flat undecorated surfaces correspond exactly in both. This is proof that the implements were

Fig. 180.

Fig. 181.

ORNAMENTED FLAT TWIN-HATCHETS. (Figs. 180 and 181.)

Fig. 180.—Ornamented flat Hatchet, from a Lake-dwelling in Glencar, county Sligo. (About one-half real size.)

Fig. 181.—Ornamented flat Hatchet, from a Lake-dwelling in Glencar, county Sligo. (About one-half real size.)

cast in the same mould, probably at one of the crannogs of Glencar, where they were found, or they may have been procured by occupants of these crannogs direct from the same *ceard* or manufacturer.

(2). *Winged or flanged hatchets* present several divergencies of detail, from the simple, narrow, chisel-edged implement in which the side-edges project in flanges

(fig. 182), so as to form grooves for reception of the cleft handle, to those of more complicated form in which a 'stop' or elevated ridge was formed at the junction between the cutting portion and the parts which received the sides of the wooden handle. The cutting edge presents great diversity of outline, from a slightly curved line to a half-moon shape (fig. 183). As the flange increased in size, the stop became attached to it; at first as a slightly-raised bar, placed nearer to the small end than to the cutting end of the implement; in the next stage the 'stop' becomes curved. In many specimens the 'stop' does not rise as high as the level of the flange; in others it is on a level, or, occasionally, a little above it. Figures 184 and 185 represent bronze single-looped axes, which were found in the same lake-dwelling. The former is 3½ inches in extreme length, ornamented with herring-bone pattern on the edges of the flange. The other axe is 5⅛ inches in extreme length. Fig. 186 presents a double fluting below the wings and 'stop.' Figure 187 is 6½ inches long; the loops for attachment are not quite symmetrical. In the final stage, the 'stop' develops into a socket in which the wooden handle was inserted. The chain of development is well

Fig. 182.
Flanged Hatchet. (About one-third real size.)

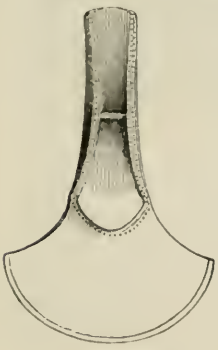


Fig. 183.
Flanged Hatchet, with semi-circular cutting edge. (About one-quarter real size.)

marked: the simple flat, wedge-shaped piece of metal, to the flanged axe, from which to—

(3). *The socketed hatchet* was an easy advance. The socket itself presents several varieties in external shape. It is circular, oval, and quadrangular (figs. 188, 189, 190); generally occupies about four-fifths of the length, and ends in a point. The majority of examples have one or more ridges, marking the core-pieces used in

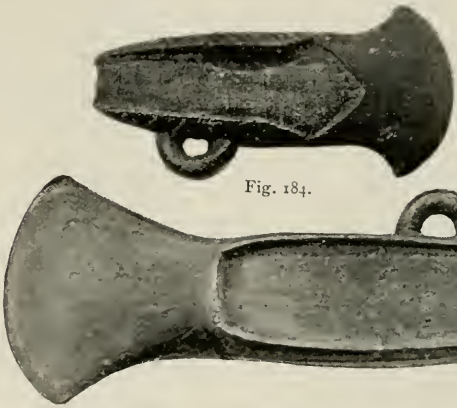


Fig. 184.

Fig. 185.

WINGED OR FLANGED HATCHETS. (Figs. 184–187.)

Figs. 184 and 185.—Bronze, single-looped, flanged and stopped Hatchets, from a Lake-dwelling in Glencar, county Sligo. (About one-half size.)

casting. These were probably utilized in retaining the wooden handle in place when driven home. Some resemble the small iron hatchets of a later period; a few are long, narrow, square, and chisel-edged. In size they vary from about six inches to one inch.

The primitive craftsmen never conceived the idea of casting an implement having in it a hole through which a handle could be passed, for no bronze hatchet of this

character has (it is believed) been as yet found in Ireland. The simple or flat hatchet was passed, like its predecessor of stone, through a wooden handle, and secured by a ligature, probably formed of hide or gut. This implement (though not provided with a socket) is evidently the type of the modern axe. A rather rare and advanced form of flat axe tapers in both directions from a central transverse ridge, near which are lateral projections on the blade, to prevent its being driven into the handle. An example is given in fig. 190A. There are nine or ten in the Collection of the Royal Irish Academy, varying from about $3\frac{3}{4}$ inches to 8 inches in length; there are others in the British Museum. Even with this precaution, constant use would inevitably drive the bronze head through the wooden handle, and to remedy this a slight ridge was cast upon the flat surface of the metal. The next step was to make the metal and the wood pass into each other; this was the origin of the winged or flanged hatchet.

Fig. 187.

Bronze, double-looped, flanged, and stopped Hatchet. (One-third real size.)

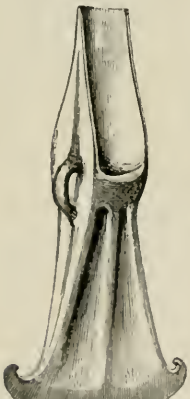


Fig. 186.

Bronze, single-looped, flanged, and stopped Hatchet. (One-third real size.)

A naturally curved piece of wood, shaped like a crooked walking-stick, was selected, and cut so as to receive the metal head. The implement was probably

lashed to the crooked part of the handle, as well as, in many instances, being secured to the handle by an attachment to a loop on its inferior edge.

Despite this advance in the mode of affixing the head, the wood must still have been liable to split. The wings and flanges of the hatchet, as well as the 'stop,' were accordingly enlarged until they gradually were made to unite; and upon the disappearance of the division separating the wooden handle into two portions, the implement appeared as the socketed

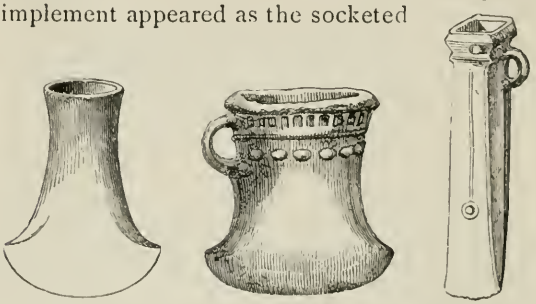


Fig. 188. Fig. 189. Fig. 190.

SOCKETED HATCHETS. (Figs. 188–190.)

Fig. 188.—Bronze, circular-socketed Hatchet. (One-half real size.)
Fig. 189.—Bronze, oval-socketed, and looped Hatchet. (One-half real size.)
Fig. 190.—Bronze, quadrangular-socketed, and looped Hatchet. (About one-quarter real size.)

hatchet. In some examples a loop appears on the lower edge to attach the head to the handle and prevent it from flying off. No rivet-holes (it is stated) have as yet been observed on socketed implements of this description. Some of these heads may have been fixed on straight shafts, which will perhaps account for the absence of loops upon even some of the best and most highly finished specimens. In such cases they may have been used as spears; but their shape is somewhat against this supposition. In one of the few recorded

instances of a bronze socketed hatchet being found still retaining its wooden handle entire, the head was beautifully fitted into a crooked piece of wood, curved after the manner of the handle of a modern hatchet. Figure 191 is believed to be the only instance of the original handle of an ancient bronze hatchet, recovered in its entirety in Ireland. The wooden handle is nearly fourteen inches long; the loop on the bronze-head is worn through at the point nearest the handle, doubtless by the friction of the ligature which originally secured it to the handle. This curious relic of the past was found near Edenderry, in the bed of the river Boyne. In England, a small, flat-shaped bronze hatchet was discovered lying at the hips of a skeleton in a primitive interment in Yorkshire. The handle could be plainly traced by a dark line of decayed wood, and it appeared as if the weapon had been worn slung from the waist. A very similar discovery was made in Derbyshire.*

Fig. 190 A.
Flat Axe, or Chisel, with lateral projections. (One-half real size.)

Fig. 191.
Bronze Hatchet, with handle still adhering. (Slightly over one-seventh real size.)

Figure 192 is a representation of a hatchet, the haft provided with a guard for the hand. The original, 4 feet 9 inches in length, is carved on one of the

* *Bronze Implements of Great Britain*, pp. 41, 42, 151, 152: Sir John Evans.

roofing slabs of an ancient sepulchral monument in Brittany. The sculpture represents the hafting of a stone hatchet, but the principle is the same, whether the head be composed of flint or of metal. Ancient Bretons endeavoured to prevent the hatchet-head from being driven through the wood by the insertion of the implement across the convex part of a curved branch, so that its smaller end rested against the inside portion of the crook; the whole was doubtless firmly secured by stout ligatures of raw hide, which would contract when submitted to a gradual process of drying. In the same locality of Brittany is a similarly sculptured stone, but the hatchet is represented, in the second example, without a guard. The peculiarly curved handles of hatchets, even of the early Iron Age, are borne witness to by the figures represented as carrying these implements, which appear on many Irish crosses (see fig. 133).

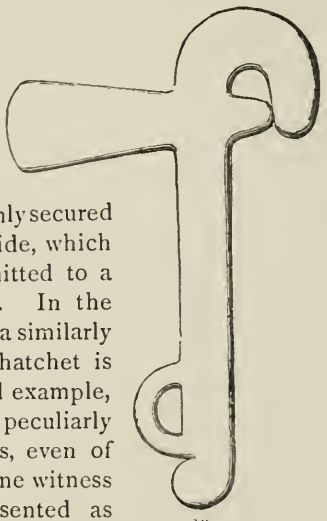


Fig. 192. Representation of a Hatchet, with handle, from a sepulchral monument near Vannes, France (about one-twenty-third real size).

In their present condition Irish bronze hatchets show little variety in colour. Those formed of copper are light brown; but most of the bronze implements are of a beautiful dark green shade, presenting a smooth and polished surface. This surface, according to the late Sir William Wilde, 'is produced by artificial malachite or carbonate of copper, into which the external

lamina of the surface has, in process of centuries, been converted, and which, having once formed, serves to prevent oxidation, and admits of a high polish. Many specimens, especially of the socketed variety, are covered with a brown coating of considerable thickness, and so complete as to obscure all traces of the original surface of the bronze. This, upon analysis, is proved to be chiefly iron, and was probably deposited on the surface of the implement while lying for a length of years in the peat, which is frequently much impregnated with ochre or bog iron. In some instances the brown ochrey crust had been deposited like a varnish on the surface of the previously formed carbonate of copper.'

The difficulty will be thus seen, for forgeries of those weapons to be palmed off on any buyer acquainted with effects which long exposure to damp, and other causes, have produced on copper or on bronze. Yet forgeries are not uncommon, a few genuine articles being generally mixed up with the counterfeits.

The primitive sword, whether made of wood, bone, stone, or copper, was sharp-pointed; and it was used, most probably, for stabbing.

The edges of bronze swords, in perfect preservation, appear as if they had been intended for thrusting rather than for cutting. These weapons are in general well balanced; many—especially those of comparatively great length and slight width—are so tempered that they may be bent considerably and yet spring back to their original form.

W. Frazer, F.R.C.S.I., makes a suggestion about the tempering of bronze implements, a matter on which various opinions have been advanced:—'One of the results of modern chemistry shows that a peculiar compound—obtained by uniting phosphorus with bronze—

possesses in an eminent degree the property of extreme hardness, on account of which it is utilized for forming the bearings of heavy machinery, &c. May not our bronzes have received their fine tempering by being annealed in the ashes of turf or peat, which afford a remarkable amount of phosphoric compounds, similar to the process by which iron is converted into steel when long heated in charcoal? We are yet unable to test the presence of phosphorus under such circumstances in bronze, even with the assistance of the spectroscope; but when advancing chemical science enables us to recognise phosphorus in minute proportions in metallic compounds, we will be in a position to determine how far this surmise is correct.'

Bronze, instead of becoming, like iron, tough and ductile when heated, appears, on the contrary, to become fragile, so that the hammering to which weapons and tools of bronze were subjected, must have taken place when the metal had cooled. It is generally thought that the art of soldering was not practised during the Bronze Age, but the art of burning bronze on to bronze was well known, and many weapons and other articles thus repaired have been noticed in archæological papers.

It is stated that a greater number of bronze swords, and also of more variety, have been found in Ireland than in Great Britain; and very many of those deposited in the British Museum are, there is reason to believe, of Irish origin.

Blades of bronze present three distinct varieties:—

(1). *The leaf-shaped sword*, which, again, subdivides into short and long examples.

(2). *The straight-edged rapier*, narrow, and triangular in form, subdivides also into two classes.

(3). *The broad, round-ended, and scythe-shaped* weapons, of which their use as swords may be said to be doubtful.

(1). *The leaf-shaped sword*, of the first variety, narrow near the handle, gradually swells in breadth to within a third of its length from the point; it has a thick midrib running up the centre of the double-edged blade, and the point is lancet-shaped (fig. 193). They have all been cast in a mould, and do not, in general, show marks of hammer, grinding-stone, or file.

The second variety of the leaf-shaped blade is characterised by the gradual increase of the blade in length, and corresponding decrease in breadth; the central stem or midrib gradually disappears, and is replaced by a slight fulness, which traverses the centre of the blade from hilt to point (fig. 194).

(2). *The straight-edged rapier*—like the leaf-shaped blade—has its broad and its narrow varieties.

The broad type tapers from haft to point, and possesses a thick central ridge (fig. 195). At the hilt the blade suddenly expands, to permit of its being attached to a cast-metal handle by two or more strong rivets, and sometimes this expansion of the blade was only notched for reception of the rivets; often it was both notched and perforated (fig. 196). There is an easy but gradual transition from the broad triangular blade to the long rapier variety. Absence of a handle-plate is a characteristic of this class of weapon.

(3). *The broad, round-ended, and scythe-shaped* weapons are generally furnished with either two or four massive rivets; they may have been attached to short metal handles, and used as swords (figs. 197–200).

Many large and thick specimens are formed of pure copper; the thinner weapons are alloyed with tin, and have bevelled edges; but the great majority have thick

BRONZE SWORDS OF THE FIRST TYPE. (Figs. 193 and 194.)

Fig. 193.—Leaf-shaped bronze Sword. (One-fifth real size.)

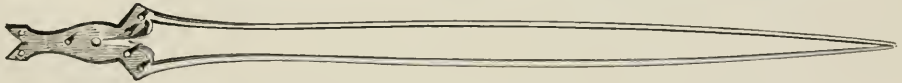


Fig. 194.—Leaf-shaped bronze Sword of the elongated type. (About one-seventh real size.)

BRONZE SWORDS OF THE SECOND TYPE. (Figs. 195 and 196.)

Fig. 195.—Straight-edged Rapier. (Nearly 16 inches in length.)

Fig. 196.—Straight-edged Rapier. (About 12 inches in length.)

central stems, or midribs, commencing at the broad expansion of the blade, for insertion into the handle. Although the points of some have been broken off, the blades do not bear on their edges traces of hacking. The rivets—some of them an inch and a half in length, and nearly an inch across the burr—show

Fig. 197

Fig. 198.

Fig. 199.

Fig. 200.

BRONZE SWORDS (OR BATTLE AXES) OF THE THIRD TYPE. (Figs. 197–200).

Fig. 197.—Broad round-ended weapon. (One-sixth real size.)
Fig. 198.—Broad round-ended weapon. (One-sixth real size.)
Fig. 199.—Scythe-shaped weapon. (One-sixth real size.)
Fig. 200.—Scythe-shaped weapon. (One-fifth real size.)

that they must have been attached to massive handles: as in the previous classes, so in this, there is a gradual transition from one variety to the other.

As a rule, swords of bronze have not suffered so much from oxidation as the hatchet-class of implements, and

they are therefore lighter in colour; neither do they present, as a general rule, the smooth patina or lacquer displayed by the probably much older class of weapons; yet they are frequently coated with an iron deposit from lying in bog impregnated with that metal.

The hafting of these various weapons deserves consideration:—When, in 1856, Sir William Wilde wrote his description of the antiquities contained in the museum of the Royal Irish Academy, there had not then been discovered a single instance of a combined bone and metallic-hafted sword bearing traces of the bone portion of the handle, either in whole or in part.

Great variety exists in the form of the metal handle-plates; most of the short broad-leaf swords terminate in straight T-like projections; the ends of the long variety of the leaf-shaped sword are flattened out into thin plates; sometimes nicked or indented at the bottom. The rivets were generally grouped in three sets: (1), those in the lozenge-shaped enlargement at the juncture of the handle-plate with the blade; (2) those in the central portion of the handle-plate; (3) and those at the extremity or pommel. This appears to have been the general principle of hafting, but there are numerous variations and exceptions. In some instances a metallic handle seems to have been riveted on, and in others there are oblong apertures instead of rivet-holes.

The handle-plates are more frequently broken than the points of the swords, and from the numerous instances in which traces of attempted welding have been found on them, it is evident that this part of the weapon was particularly liable to break. In order to counteract this defect, in some of the finest swords, principally those of the long-leaf shape, a triangular elevation, swelling out

at the base of the blade, is carried down on the handle-plate. In his *Lake-Dwellings of Switzerland*, from the result of extensive explorations, Keller was of opinion that, in Central Europe, the primitive type of bronze sword was provided with a flat tang, intended to be inserted in a handle of some other material, which material then gradually gave place almost exclusively to metal, but the final form assumed by the perfect bronze sword, with massive handle made of homogeneous metal, has however not as yet been found in Ireland, though small daggers thus formed have been discovered.

The first recorded instance of the discovery of a bone-hafted sword was that of a beautiful specimen of the bronze leaf-variety found in the year 1865 in Lisletrim Bog, county Monaghan. The sword is in good preservation; it has a thick, solid midrib running up the centre of the blade; it is admirably balanced, and has, on both sides, a sharp uninjured edge from hilt to point; the surface is thickly coated with deep-green patina. The bone handle was originally retained in position by eight bronze rivets, of which six remained. Professor Owen pronounced a portion of the bone, submitted to his inspection, to be 'mammalian, and probably cetacean.' Since this discovery at least seven other hafted swords of bronze have been recovered. For descriptive particulars see note at end of volume.

Solinus thus describes (*Polyhistor.*, c. xxii.) the manner in which the swords of the ancient Irish were hilted:— 'Those who study elegance adorn the hilts of their swords with the teeth of great beasts which swim in the sea. They are as white and shining as ivory. After all, man's chief glory is in the glitter of arms.' In an Irish MS., entitled *The Banquet of Dun-na n-Gedh*, a

warrior is depicted as wearing at his side 'a sword with knobs of ivory, and ornamented with gold.'

The second variety of hafting appears to have been practised specially with the *long, straight-edged, rapier-shaped weapons*. A solid metal casting, in one piece, hollow in the handle, which is cylindrical, was riveted on the thin and expanded portion of the lower part of the blade by three or more stout studs or rivets, and broad nut-like burrs or washers. Few perfect examples have been recorded; and it is difficult to account for the fact of so few of those solid handles—some of which must have been an inch thick where crossed by the rivets—having been recovered. These large blades could not have been adapted to wooden or bone handles, as, independent of the discovery of metal hafts for a similar description of implement, both in Ireland as well as on the Continent, the shape of the hammered-out end of these massive rivets shows that this clinching must have been effected over metal apertures, and not on any softer or yielding substance.

At the time the catalogue of the Museum of the Royal Irish Academy was compiled there had not been then brought to light any example of a sword-sheath composed altogether of bronze. Since that period several have been discovered.

Amongst the fragments of axes and other miscellaneous articles found in the county Roscommon in 1869 were portions of a bronze sword-scabbard. Several perfect specimens were brought to light on the site of a lake-dwelling at Lisnacroghera, county Antrim. The iron sword-blades in them differ in form from the bronze type, although of nearly the same length, *i. e.* about twenty inches over all. The blades taper gradually to a point from midway down their length, and retain

the central ridge. The workmanship of the bronze sheaths, which bear traces of enamel, is exquisite. The decoration of one of them is very remarkable, the distinctive peculiarity being its spiral character—a perfect specimen of combinations of involved circles and curvilinear lines.

The greater number of scabbards would appear to have been made of perishable material; save those found at Lisnacroghera and the fragments of a specimen from the county Roscommon, none of any antiquity have been discovered in the British Isles.

A small quadrangular ferrule, terminated by a circular button-knob, and now in the collection of the Royal Irish Academy, is thought to be the extremity of the scabbard of a sword of the rapier variety. Other articles have been found, which, undoubtedly, served as terminals to scabbards of a broader type of bronze sword. They are formed of thin bronze, and although differing widely in shape, were evidently intended for a common purpose. The thin, small, hollow terminal or capsule is perforated above the convex edge by one or more rivet-holes for attaching it to the end of the sheath; then the terminal becomes more expanded, and the sides are prolonged into a boat-like form, which projected on either side beyond the scabbard to which it was attached by rivets. This form becomes exaggerated in outline until, in one example, it attained a length of more than seven inches, terminated at each extremity by a small button, these must have projected beyond the scabbard; though the latter possibly expanded towards the bottom, resembling—as pointed out by Sir William Wilde—those figured on some Roman sculptures; as the light and short bronze sword was, probably, hung at the hip, the projection would not

inconvenience the wearer. There can be little doubt, however, that many of these terminals were not designed for chapes, but are the pommels of sword-handles.

Daggers of bronze, in form, resembled miniature swords, *and may be classified in the same manner* (figs. 201–206).

They were, in general, attached to their handles by rivets; but the blades and handles of small bronze daggers and knives are frequently formed of one piece of

Fig. 201.

Fig. 202.

Fig. 203.

DAGGERS OF BRONZE OF VARIOUS TYPES. (Figs. 201-206.)

Fig. 201.—Leaf-shaped Dagger. (About nine inches long.)
Fig. 202.—Triangular-shaped Dagger. (One-third real size.)
Fig. 203.—Triangular-shaped Dagger. (Two-thirds real size.)

metal. There is also a variety of single-piece dagger, its distinguishing characteristic consisting of either an open-work handle (figs. 207, 208), or having long sword-like metal handle-plates, with ridges or raised narrow flanges on each flat-side, intended to keep the handle-piece in position.

Occasionally the socketed-end extends so far that the handle may be said to be partly of wood, bone, or what-

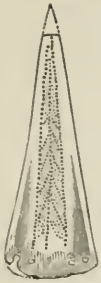


Fig. 204.

Fig. 205.

Fig. 206.

Fig. 204.—Triangular-shaped Dagger. (About five inches long.)
Fig. 205.—Triangular-shaped Dagger. (About five inches long.)
Fig. 206.—Scythe-shaped Dagger. (About eight inches long.)

ever happened to be the material, and partly of bronze. The socket varies in shape, being circular, oval, or quadrangular; it is pierced for reception of a rivet, passing either from front to back or from side to side (figs. 209–213).

Except the scythe-shaped swords be classed as battle-axes, this kind of bronze weapon is comparatively rare. Some short blunt implements with rounded ends—many of them formed of copper—could not have been used as stabbing weapons. They were probably set at right angles upon stout staves. They would, in this position, be most formidable weapons (figs. 214, 215).

Fig. 207.

Fig. 208.

BRONZE DAGGERS WITH OPEN-WORK METALLIC HANDLES.
Fig. 207.—Length about 9 in.
Fig. 208.—Length about 11½ in.

Another form of bronze battle-axe blade was found in

the bog of Rock Forest, near Roscrea, county Tipperary. This weapon resembles, in its flat surface and midrib, a scythe-shaped sword-blade. Battle-maces are rarely found. They consist of hollow, spiked, bronze-heads, which were probably fastened on stout wooden handles. In length they vary from two to six inches, and are generally about an inch and a-half across the socket. In *The Dublin Penny Journal* of 1833 a representation

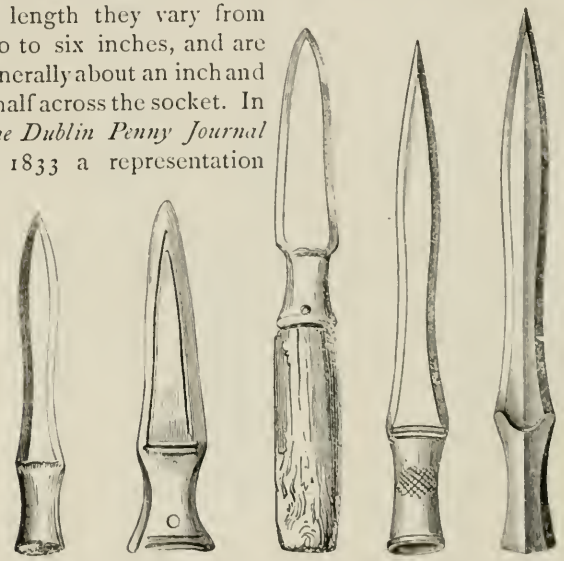


Fig. 209. Fig. 210. Fig. 211. Fig. 212. Fig. 213.

DAGGERS OF BRONZE—SOCKETED VARIETY. (Figs. 209-213.)

Fig. 209.—Length, 8¾ in. Fig. 210.—Length, 5⅝ in.
Fig. 211.—With yew handle. Length, 8⅛ in. Fig. 212.—Length, 10¼ in.
Fig. 213.—Length, 10⅝ in.

is given of an 'ancient Irish war-club' found in the county Roscommon (fig. 216).

A curious class of bronze implements which have been designated sickles by some antiquarians, may, with more probability, be assigned to the bill-axe class. In

shape they vary from an angular weapon, with a more or less curved blade, and provided with a round or oval socket, to

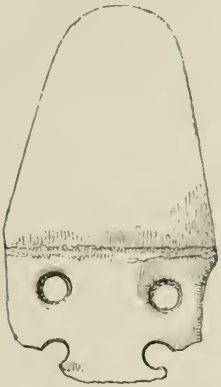


Fig. 214.—Length, 5¾ in.

Fig. 215.—Length, 9 in.

Bronze Battle Axes. (Figs. 214–216.)

those of considerably smaller size. These implements were all attached to the handle by rivets; many specimens are sharp on both edges.

Whatever the original use of these so-styled sickles may have been, it is comparatively certain that although they were employed in the field, it was in a military sense, not for agricultural purposes. They may be divided into three classes:—

(1). Those possessed of perforated sockets (fig. 217).

(2). Those having the socket closed above, the blade springing from the side of the socket (fig. 218).

Fig. 216.—One-half real size.

(3). Those having the socket also closed, but the blade, which is very much curved, springing from the top of the socket (figs. 219, 220). The use of this last class is very problematic.

Fig. 217.—Length, 6¾ in.

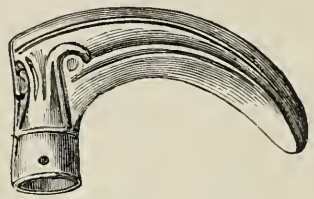


Fig. 218.—Length, 6¼ in.

Fig. 219.—Length, 5 in.

Fig. 220.—Length about 8 in.

Implements styled Sickles, more probably Bill-Axes. (Figs. 217–220.)

Spear-, or javelin-, and dart-heads of bronze, of every variety, and of most graceful forms, have been found in abundance.

Spear- or javelin-heads may be divided into four varieties:—

(1). The simple leaf-shaped spear-head, either long and narrow, or broad; the socket pierced to allow it to be fixed to the shaft with rivets (figs. 221–224).

(2). Spear-heads with loops on each side of the socket, and on the same plane as the blade (figs. 225–230).

(3). Spear-heads in which the loops have been moved up until they are enclosed between the inferior edge or butt of the blade and the socket (figs. 231–233).

(4). Spear-heads in which the loops are moved still farther upwards, and form side apertures in the blade itself (figs. 234, 234A).

One of the largest spear-heads discovered in Ireland is about thirty-six inches in length; a distinguishing characteristic of this example is the loop, or ear, for securing it to the shaft. This loop was gradually moved up from the edge of the socket, first up to, and then into the blade itself. One of the best examples of this high style of workmanship—a form comparatively rarely found in Ireland—was dredged up in the bed of the Lower River Bann. It is pierced on either side of the midrib of the blade by two gracefully curved

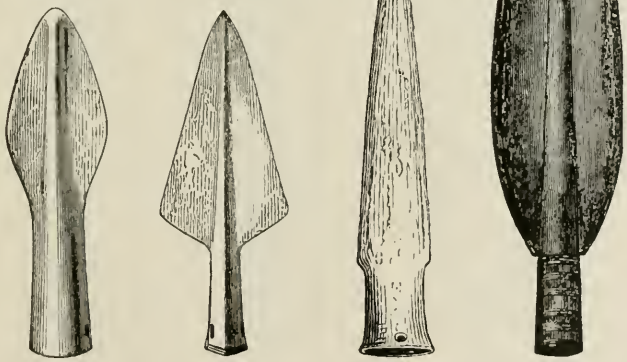


Fig. 221. Fig. 222. Fig. 223. Fig. 224.

BRONZE SPEAR-HEADS OF THE FIRST VARIETY. (Figs. 221–224.)

Fig. 221.—Length, 3½ in.
Fig. 222.—Length, 5⅛ in.
Fig. 223.—Length, 4½ in.
Fig. 224.—Length, 8½ in.

apertures, evidently cut for the purpose of lightening

the weight and economising the metal without detracting from the strength of the weapon.*

A bronze spear-head and a gold ring were found in 1837 by labourers within four feet of the surface whilst cutting turf in the island of Valentia. The two articles were close together, and the discovery was made not far

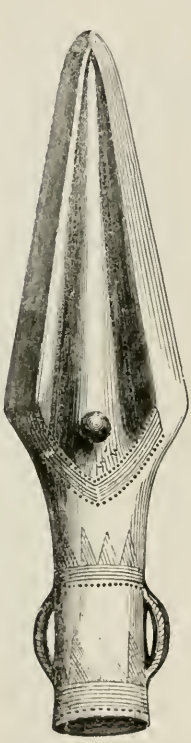


Fig. 225.

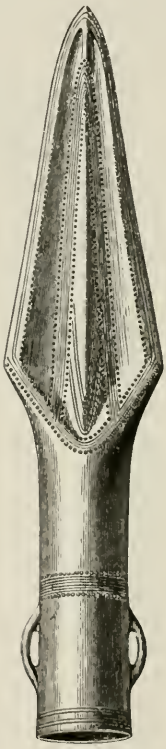


Fig. 226.

Fig. 227.

BRONZE SPEAR-HEADS OF THE SECOND VARIETY. (Figs. 225–230.)
Fig. 225.—Length, 5 in. Fig. 226.—Length, 7¾ in. Fig. 227.—Length, 6½ in.

from the harbour. The gold ring was as pure in colour as when first made, but the spear-head was

* *Ulster Journal of Archæology*, vol. ii., pp. 77, 78.

covered with a greenish patina. A wooden shaft, five feet in length, retained in the socket, went to dust when touched. The upper portions of wooden shafts still retained in the socket of spear-heads, have been occasionally discovered, and on the site of the lake-dwelling of Lisnacroghera two butt-ends of wooden lances were found in their bronze terminals (fig. 235). These specimens are invested with peculiar interest, as they disclosed the use of a numerous class of metallic objects, resembling bronze door-handles, which had been an enigma to antiquaries. To one of the Lisnacroghera relics was attached the whole of the original shaft, some eight feet in length. The iron spear-heads, one of them sixteen inches in extreme length, were of beautiful smithwork: and the find was a fine example of the transition stage between bronze and iron. These bronze spear-butts are evidently the same class of articles mentioned by Dio Cassius, who wrote a description of the Caledonians about A.D. 180. He states

Fig. 228.
Length, 7¼ in.

Fig. 229.
Length, 3¼ in.

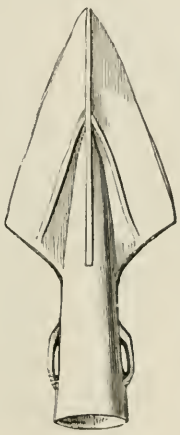


Fig. 230.
Length, 4¼ in.

that 'their arms were a shield and a short spear, with a large bronze knob at the butt-end of the shaft, for the purpose of being shaken (or struck), and by its rattling, to inspire the enemy with terror.'

The term darts or bolts may be applied to the class of articles which appear to be intermediate between the spear or javelin class and the arrow-head. There are many sub-varieties. There is—(1) A rare form of leaf-shaped darts or bolts, which may have been used as arrow-heads. (2) A plain triangular head, of which sometimes the stem or socket is quadrangular instead of round, and sometimes having loops on the sides of the socket. (3) A long triangular recurved-edged blade; very scarce. (4) Heads in which the loops, as in the larger spear-head examples, develop into large lateral apertures in the blades. (5) There is the small narrow-bladed, sharp-pointed, and straight-edged head, generally provided with loops on the socket. In short, this group of weapons designated, for the sake of classification, 'darts and bolts,' presents all the various forms of the spear-head. Many, however, are most elaborately decorated both in the process of casting, and also by hand.

Fig. 231.

Fig. 232.

Fig. 233.

BRONZE SPEAR-HEADS OF THE THIRD VARIETY. (Figs. 231–233.)

Fig. 231.—Length, 15 in.
Fig. 232.—Length, 5½ in.
Fig. 233.—Length, 4¾ in.

Arrow-heads of bronze appear to have been usually socketed, and they vary very much in size. In some the socket is continued to near the pointed extremity (fig. 236), whilst in others the blade greatly exceeds the socket in length.

Arrow-heads of a second variety are small, thin, and flat. They were inserted into the shaft by means of slender tangs. Figure 236A represents a typical specimen of an advanced type; it is $3\frac{1}{2}$ inches in length, and was evidently cast in a single-piece mould, as one side is fuller than the other; it is provided with lateral stops, like some flat hatchets (see fig. 190A), to prevent its being driven into the wooden shaft by violent impact with the object struck.

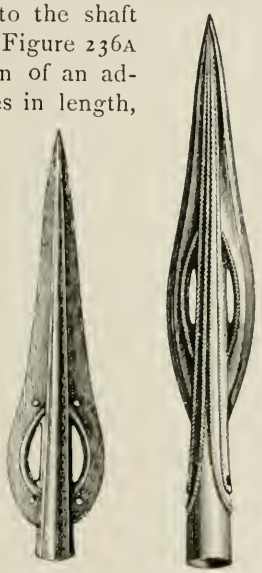


Fig. 234. Fig. 234 A.

BRONZE SPEAR-HEADS OF THE FOURTH VARIETY. (Figs. 234 and 234 A.)

Fig. 234.—Length, 11¼ in.
Fig. 234 A.—Length, 11½ in.

Bronze arrow-heads are comparatively rare; the causes which account for this are given in the previous chapter.

Bronze hatchets were cast in three, if not more, varieties of moulds—in those of sand or clay, as in modern castings; in those of metal; and in those of stone.

Of the first method no vestige has been discovered; of the second only one has, as far as the writer is aware, yet been found in Ireland (fig. 236 B), though there are many recorded discoveries of metallic moulds in

England; of the third method many traces have been brought to light.

The hatchet-moulds of stone are of two kinds. The single-piece mould consists of an indentation cut on the face of a block of stone; but it possesses no counterpart or lid, and appears to have been chiefly employed in making the simple flat axe.

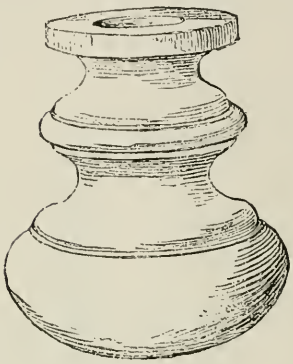


Fig. 235.

Spear Butt-end of bronze, from the Lake-dwelling of Lisnacroghera. (Two-thirds real size.)

The double mould is formed of two portions fitted together, and it was usually employed for casting hatchets of the winged or socketed varieties.

The single mould of micaceous sandstone, represented by fig. 237, was

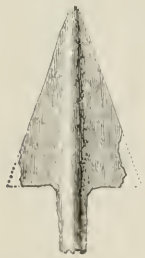


Fig. 236.

Fig. 236 A.

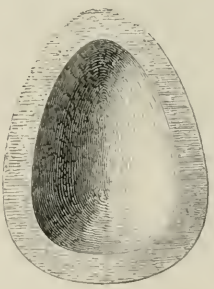


Fig. 236 B.

Fig. 236.—Triangular Arrow-head. (Length, $3\frac{3}{8}$ in.)
Fig. 236 A.—Advanced type, with stops. (About one-third real size.)
Fig. 236 B.—Side of bronze mould. (One-quarter real size.)

found near Ballymena, county Antrim, and had been

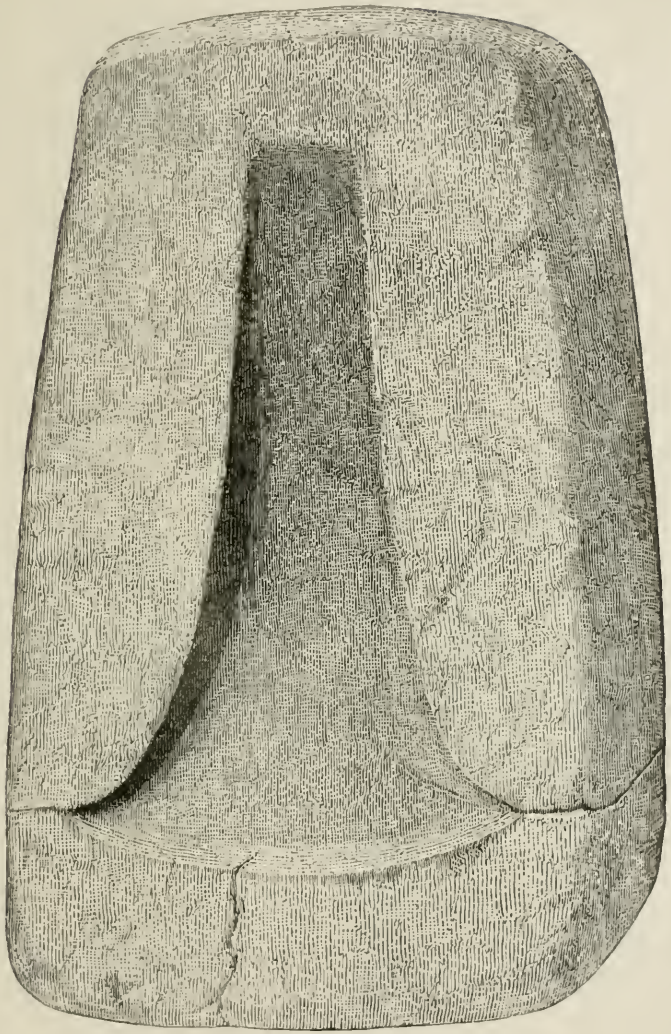


Fig. 237.

Single-piece Mould, for casting a simple flat hatchet. (One-half real size.)

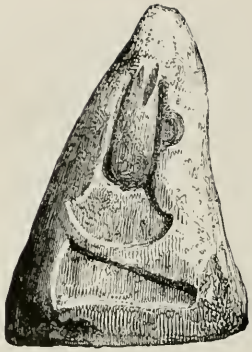


Fig. 238.
Stone Mould for casting two varieties of hatchets. (One-fourth real size.)

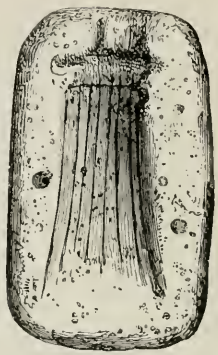


Fig. 239.
Stone Mould for casting ribbed hatchets. (One-third real size.)

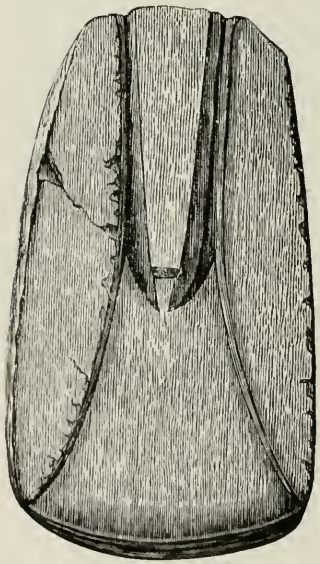


Fig. 240.
Stone Mould for casting hatchets with stop and flanges. (One-half real size.)

Fig. 241.
Stone Mould for a small hatchet. (Full size.)

formed for casting a flat axe of the ordinary type. A hatchet cast in this mould would be flatter on one face than on the other, and be blunt at the ends, although much thinner there than in the middle. Before use it would be submitted to a hammering process, to condense the metal, and render it harder and fitter for cutting purposes: the sides and faces of plain hatchets have usually been wrought thus with the hammer.

Figure 238 shows the mould for a simple flat hatchet; also another with a stop and loop for attachment to the handle.

Figure 239 is the half of another hatchet-mould of mica slate, much worn, but still showing the apertures by which it was adjusted to the other, or missing, portion.

Figure 240 is a sandstone mould for a hatchet with stops and flanges; figure 241 is the half of another of green schist, for a small axe with transverse edge.

Moulds of stone specially suited for casting dagger-blades, spears, and arrow-heads, are frequently found. This would tend to strengthen the hypothesis of the local manufacture of bronze; and it has further been observed that these early bronze objects, although bearing a general likeness to similar articles found in Great Britain and on the Continent, yet have often differences of style peculiar to themselves.

Figure 242, from a lake-dwelling in Lough Gur, county Limerick, is the half of a mould; another similar one, if placed on top, would deliver perfect spear-heads, provided with side loops, but slightly varying in form. Figure 243 is a piece of sandstone having moulds sunk on three sides; on that represented in the illustration is one for a diminutive spear, or perhaps an arrow-head, with loops for attachment to the shaft.

Figure 244 represents a half-mould for a dagger; on the reverse face are moulds for a small flat chisel with side-stops, for a diminutive flat triangular tool, and also a defective mould for a portion of a flat ring. The stone of mica slate was discovered in the vicinity of Broughshane, county Antrim.

Figure 245 is a half mould for a knife, provided with a tang; it is of sandstone, and was found near Ballymoney, county Antrim.*

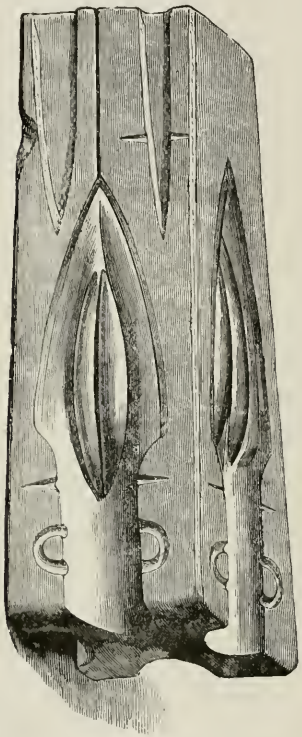


Fig. 242.

Fig. 243.

Fig. 242.—Half of Stone Mould for spear-heads, &c. (One-half real size.)
Fig. 243.—Mould for diminutive spear-head. (One-half real size.)

Moulds for casting swords are rare; there is, as yet, only one recorded instance of such a discovery in

* *Bronze Implements of Great Britain and Ireland*, pp. 428, 429.

Ireland. Several examples may be seen in the British Museum. The wooden model of a sword, the handle resembling single-piece bronze swords found on the Continent, has been de-

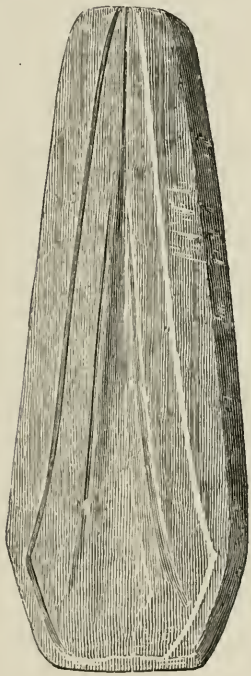


Fig. 244.

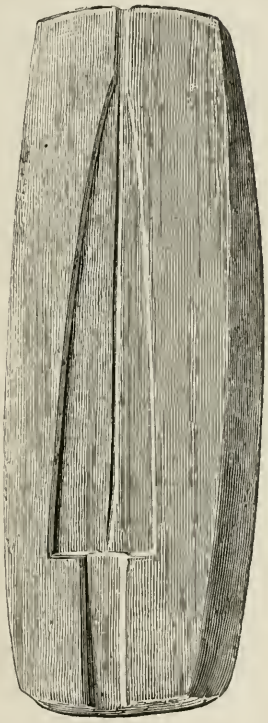


Fig. 245.

Fig. 244.—Half Mould for small dagger. (One-half real size.)
Fig. 245.—Half Mould for knife. (One-half real size.)

scribed by Sir William Wilde. It had a large projection on one side of the blade. If a model for casting from, by means of a sand or other mould, this

projection would form the aperture through which the molten metal might be poured (fig. 246).

Numerous articles of bronze have been found together in a fragmentary condition, the fractures being old, or at least the articles do not present the appearance of having been subject to violence after their discovery; so that, judging by the comparatively worthless character of the entire 'find,' they could only have been intended for recasting. In and around an antique bronze vessel, found in the year 1830 at Dowris, in King's County, an extensive and miscellaneous collection of bronze articles was discovered; whilst in 1869 a hoard of bronze fragments, about two hundred in number, was brought to light in the county Roscommon. The numerous objects thus found together in a fragmentary condition afford

Fig. 246.—Wooden Model of sword. (About one-sixth real size.)

interesting testimony that bronze implements and weapons of every description were, at one period, manufactured in Ireland.

Anvils of the early bronze period are rare. One was discovered in the county Sligo. This bronze block is 3 inches high, 3 inches in breadth, $1\frac{3}{4}$ inches thick at base, $1\frac{1}{2}$ inches at top, and it weighs $4\frac{1}{4}$ lbs. Two of its corners are almost right angles, another rounded, and another bevelled, enabling the smith to turn work, square, round, or bevelled. Hammer marks are visible on the top of the anvil. There is a bronze anvil in the collection of the R. I. A., but it is evidently of the Iron Age. Another anvil of bronze was found in Scotland. In the lake-dwelling of Auvernier, in Switzerland,

a bronze anvil was discovered. It is in the form of a wedge, tapering at one end to allow of its being driven into timber; the other extremity is convex, very smooth, about 2 inches long, and upwards of an inch in breadth; it weighs nearly 11 ounces. According to Sir William Wilde, stone hammers and stone anvils were employed by country smiths in some remote districts until a very recent period.

In many instances collections of small bronze rings have been found. These were formerly believed by antiquarians to be 'ring-money,' used for purposes of barter; but with a greater degree of plausibility, they are now-a-days considered to belong to defensive chain-armour. These rings appear to have been very much in use among the early inhabitants; of eleven articles discovered in one locality eight were rings. In this 'find' they were too small for armlets or anklets, too weighty for ear-rings, and too large for finger or thumb rings.

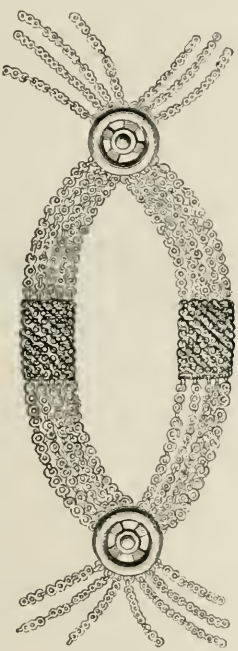


Fig. 246 A.

Fragment of supposed bronze ring-armour. (About one-tenth real size.)

In the collection of antiquities belonging to the Royal Irish Academy, there is the remains of a suit of bronze ring-armour, dug up about the year 1836 from a bog near the town of Roscommon. The only entire portion is represented by figure 246 A. This fragment, evidently for suspension round the shoulders,

measures about 16 inches between the bosses. With it lay a number of detached rings and links. A full description of this find, with illustrations, may be seen in the Catalogue, Museum R. I. A., pp. 575–580. This relic evidently belongs to a very late period of the Bronze, possibly even of the Iron, Age.

The bronze object represented by figure 247, was found on the site of a lake-dwelling in Glencar, county Sligo. It is labelled 'a charm.' Vallancey, in his *Collectanea*,

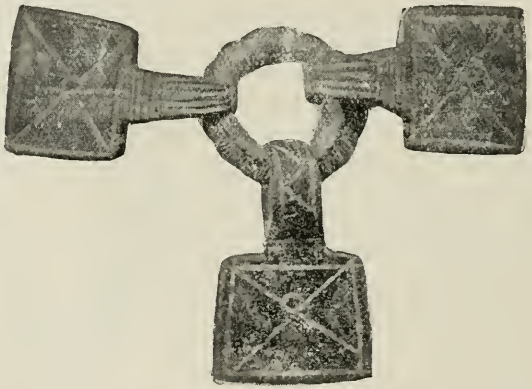


Fig. 247.
Bronze 'Strap-fastener.' (Slightly less than two-thirds real size.)

describes a very similar article as a 'triangular talisman.' Many specimens of this class are elaborately decorated, first by casting, and afterwards by finishing off with punch and graver. The decorated ring has three attachments fastened to it and playing round its circumference, which in places is greatly eroded by the friction. In the attachments, still retained by the rivets, portions of leather, or of some like substance, have been noticed. The larger class of this description of article is now

supposed to have been used for fastening harness-straps together ; but the article represented by fig. 248 is evidently too diminutive, as well as fragile, to have been employed in harness-breeching. It may have been used to clasp sword-straps, leathern coats, or chain-armour.

Strange to narrate, it is to our lake-dwellings that we principally owe the discovery of undoubted horse furniture of great antiquity. There are nearly one hundred specimens of bronze bridle-bits in the Collection of the Royal Irish Academy. They were divided by Sir William Wilde into three varieties :—

Fig. 248.

Bronze 'Strap-fastener,' found in the river Nore. (One-half real size.)

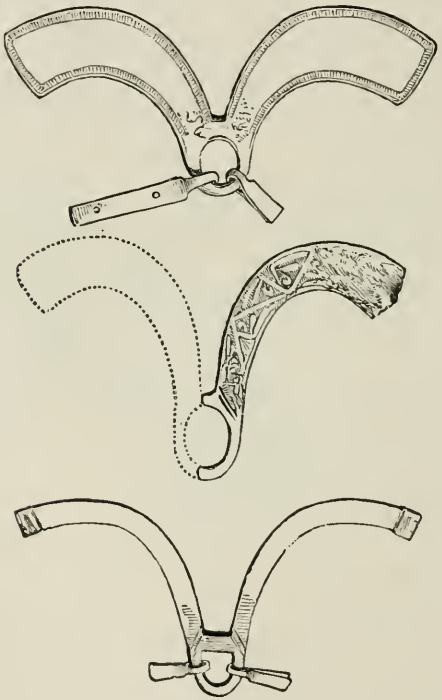
'(1). The simple riding snaffle, or bridoon, with a strong mouth-piece in two parts, having an exceedingly well-fitted hinge-stud between, and large cheek-rings. which, as well as the extremities of the bit, are in many specimens highly ornamented, and in some instances jewelled and enamelled.

'(2). The double-rein driving-bit, without an intermediate piece in the hinge, but with metal straps or rods, running on the cheek-rings for attachment of the reins ; and

'(3). The small (and probably driving) bit, with an iron mouthpiece, and no rings, but broad, and in most

instances highly-decorated open-work cheek-plates for attachment of the reins.'

Bridle-bits and cheek-pieces, were discovered on Loughran Island in the river Bann; of these one is



Figs. 249–251.—Bronze Cheek-pieces of bits. (One-third real size.)

slightly ornamented (fig. 249); the second represents a fragment merely, but it is highly ornamented (fig. 250) and the third (fig. 251), remarkably slender, measures six inches across the two metal attachments for the

rein-straps, still retained in the posterior loop. Figures 252 and 253 are cheek-pieces from the lake-dwellings of Lough Faughan and that of Ardakillen.

Various suggestions have been offered as to the use of a class of objects, often beautifully decorated, and which are usually designated 'head-stalls,' as they are often found in connexion with bridle-bits of bronze. It appears to be thought, by some antiquaries, that they were pendent bridle-ornaments; the loops, at the end of their forked extremities, in nearly every instance,

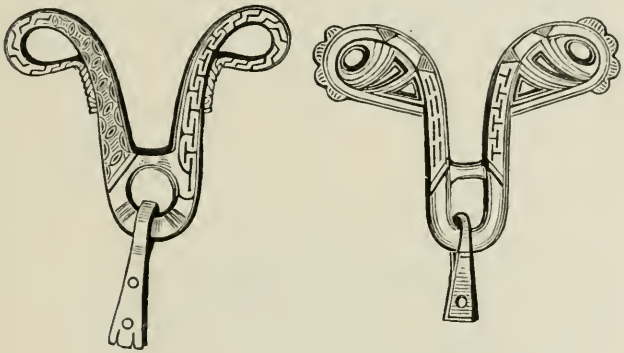


Fig. 252. Fig. 253.

Figs. 252 and 253.—Bronze Cheek-pieces of bits. (Two-thirds real size.)

bear marks of wear in a manner which seems to prove that, when in use, they were worn suspended. It is quite possible that, instead of being suspended, these articles were placed erect, over the horses' heads, and that plumes were attached to them, and attention is directed to the objects depicted over the horses' heads in figure 50, p. 247. Antiquaries style these bronze remains 'head-stalls'; they vary in length from ten to fourteen inches, and in breadth from four to eight

inches. Figure 254 represents one found in the county Sligo. The central object, marked (2), is one of the loops (full size), which terminate the spurs.

To an also comparatively recent period—the latter end of the Bronze Age, or the commencement of the Iron Age—may be relegated those beautifully formed bronze vessels (fig. 255),* generally found in peat, and which seem to have been in great requisition, as they usually bear traces of frequent repairs. Figure 256 represents a copper caldron. The metal is hammered thin, and is patched on the bottom in two places, the dents of the round-headed hammer being quite distinct. It has a turned-over ledge, about three-quarters of an inch broad. It was found on a crannog site in the West of Ireland.

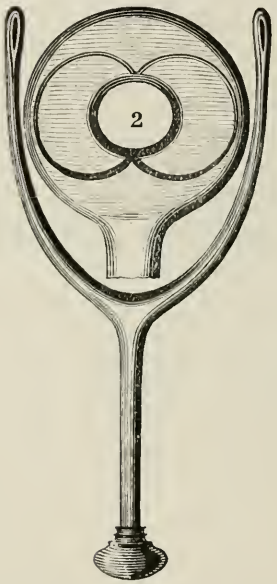


Fig 254.—Bronze Head-stall, found in the county Sligo.

Figure 257, the largest 'built' caldron in the Collection

* The Germans who invaded Italy to support their first emperors brought back the bones of their princes and nobles who had perished in war; and Gibbon states that caldrons for that purpose were a necessary piece of their travelling furniture, and a German who was using one for boiling down his dead brother, promised it to a friend after he had done with it himself. Were our Irish copper vessels ever used for a similar purpose?—*Ulster Journal of Archæology*, vol. v., p. 252.

of the Royal Irish Academy, is nineteen inches across the mouth, twelve inches in depth, and is formed of a number of pieces of thin bronze, each plate about three inches broad, joined at the seams with rivets; these bear the marks of hammering. The vessel is furnished with solid bronze handles, and has all the appearance of belonging to the Late Bronze or Early Iron Age.

Fig. 255.

Saucer-shaped Vessel of bronze, from the Lake-dwelling of Cloonfinlough. Late Period. (About one-fifth real size.)

Besides these vessels there is another class, in form, according to Sir John Evans, almost identical with bronze urns from the cemetery at Hallstatt, of which several are considered by some writers to be of Etruscan workmanship. A remarkably fine specimen of a vase of

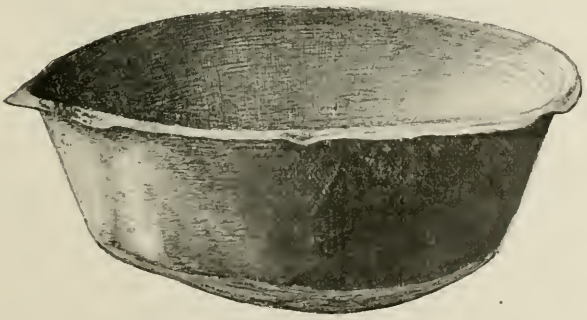


Fig. 256.—Single-piece copper Caldron, from the site of a Lake-dwelling. Late Period. (Diameter over ledge two feet; depth, eight inches.)

this character was found in a bog near Armoy, county Antrim, and is figured in *Bronze Implements*, &c. Figures 257A and 257B represent vessels of this variety. The first is formed of eight sheets of thin bronze; the rim

strengthened by a strong bronze wire passed within its edge. It is fourteen inches wide at the mouth, and twelve and a-half inches deep. Figure 257B is also a vase-shaped vessel, formed of three sheets of thin Dowris-coloured bronze. It is eighteen and a-half inches deep, and fifteen inches wide in the mouth. Analysis showed it to be composed of:—Copper, 88.71; tin, 9.46; lead, 1.66 (=99.83), with a slight trace of iron.

Caldrons formed of iron, and very similar in shape to those described, have been discovered on the sites

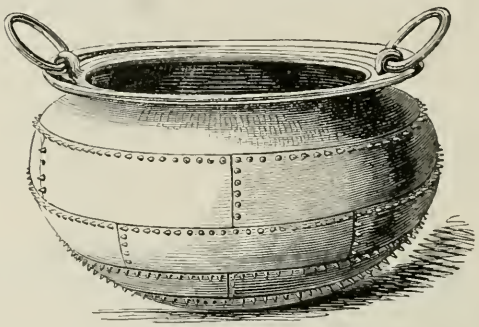


Fig. 257.—'Built' Caldron of bronze. Probably of the Iron Age.

of lake-dwellings, showing the continuity of their fabrication. In mediæval times, when an Irish chief pillaged the territory of his neighbour, if the fact happens to be recorded by the annalists, an enumeration of the number of copper caldrons carried off is sometimes given. In the 'Book of Rights' caldrons are mentioned as the tribute of petty chiefs to those of superior rank. The scene in 'Macbeth,' where Hecate commands—

> 'And now about the caldron sing,
> Like elves and fairies in a ring,
> Enchanting all that you put in,'

and the witches around the seething caldron is a good description of British superstition.

Irish magical caldrons appear to have been used, not for destructive, but for healing purposes. We are told how, some thousand years B.C., the chief magician of the tribe of the Tuatha de Danann prepared a caldron in which healing herbs were decocted, over

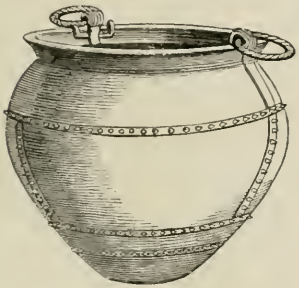


Fig. 257 A.

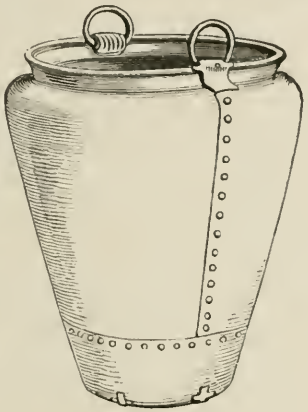


Fig. 257 B.

Fig. 257 A.—Conical 'built' vessel. (About one-eleventh real size.)
Fig. 257 B.—Lofty 'built' vessel. (About one-eleventh real size.)

which incantations were pronounced, and how the wounded warriors, carried from the battle and plunged into the concoction, were immediately healed, and enabled to return to the fight, for the druids—

> 'By force of potent spells, wicked magic,
> And conjurations, horrible to hear,
> Could set the ministers of Hell at work,
> And raise a slaughtered army from the earth,
> And make them live, and breathe, and fight again.'

Most of the objects connected with war, the chase, sepulture, or household economy, are well represented

in collections of antiquities. An exception, however, must be made with regard to shields formed of hides of animals—such as are at this day carried by the aborigines of Africa—of which, owing to the perishable material of which they were composed, none have descended to our times. Warfare could not have been carried on without some defensive protection, and shields formed of other and more enduring substance than leather have been discovered. During the summer of 1863 a wooden shield was found, under ten feet of turf, in the townland and parish of Kiltubride, county Leitrim. It was oval in shape, and when first exhumed measured twenty-six and a-half inches long by twenty-one inches broad, and about half an inch thick. It was plain on the reverse side, with an indentation 'traversed by a longitudinal cross-piece or handle, carved out of the solid, and occupying the hollow of the umbo or central boss on the front or anterior face. The front is carved with ribs or raised concentric edges, triangular in section, seven in number, and arranged in pairs, except the outward one, which is single. The conical boss, also carved out of the solid, stands three inches high, and measures eight inches in the long diameter.' One end of the shield is narrower than the other; the boss is also a little crooked; but this may be chiefly attributed to contraction in drying and to pressure whilst embedded in the bog. The wood of which it is composed is alder.

Unlike ancient classic shields, through which the forearm was passed, the Irish wooden shield, grasped by the cross-piece underneath the umbo, could be projected to full arm's-length. The Irish word 'sciath,' *i. e.* shield, is now-a-days applied to a shallow wicker basket of oval shape—sometimes called a skib—'used

in the south and west for straining potatoes, and which very closely resembles, both in size and form, this wooden shield; and there can be very little doubt that wicker-work formed the basis of many of the shields which in former days were covered with leather.'

Figure 258 represents a (supposed) battle scene, sculptured on a panel of a stone cross in Kells, county Meath. The original, about four feet in length, evidently depicts a conflict between warriors of different tribes or different nationalities; the one armed with long-handled spears, and protected with circular shields, from the centre of which project pointed bosses of considerable size. The opposing party also have shields,

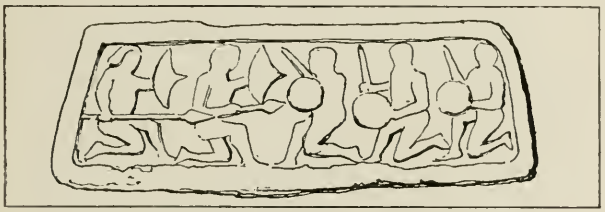


Fig. 258.—Battle Scene: Warriors with Shields. Christian Period.

but without a boss, and they are armed with short swords, of a kind often found in our lake-dwellings, and of a style supposed to have been adopted on the first introduction of iron as the regular material for the formation of weapons of warfare. The suggestion may be hazarded that the spearmen are probably Northmen, their opponents being the Irish. Another sculpturing, from the same cross, is much weather-worn, and imperfect at one end, but it is highly interesting. The subject seems to be a procession of horsemen (fig. 259). The leading figure wears a mantle, extending over the horse's back, and seemingly covering the upper portion

of a circular shield, a means of defence carried by two of the other horsemen. The date of these curious pieces of sculpture is doubtful; still, whether carved at the time, or mere subsequent reproductions of earlier work, they apparently delineate the weapons of offence and defence used by warriors in Ireland at a very early period after the introduction of Christianity.

A shield formed of a disc of bronze, slightly convex, and strengthened by a series of six concentric circles formed of hollow bosses, about two hundred in number,

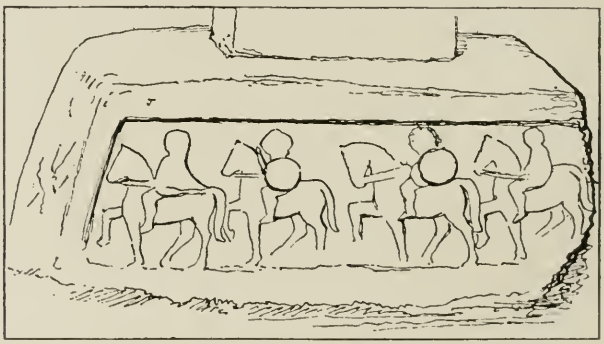


Fig. 259.—Procession of Horsemen: Warriors carrying Shields. Christian Period.

surrounding the central umbo, was found in the bog, close to the banks of Lough Gur, Co. Limerick (fig. 260). It appears to have been carried slung on the shoulder, the slinging loops being fixed so as to form bosses on the obverse, equal in size to those contained in the circle; it was furnished with a very small handle, interiorly traversing the umbo. The rim is an inch and three-quarters in width; the diameter two feet three and three-quarter inches. The holes with which the shield is pierced are not proofs of warfare; it was the discoverer—a boy with

a fishing-gaff—who inflicted the injuries in bringing his novel spoil to land. The looseness of the rivets at the inside loops for the strap by which the shield was carried seems to point to the fact, that some material—most probably the hide of an animal—had originally formed an inner lining, as the thin bronze, being in itself incapable of withstanding the impact of a fishing-gaff, could afford no real protection against even ordinary weapons of warfare, so that the coating of sheet

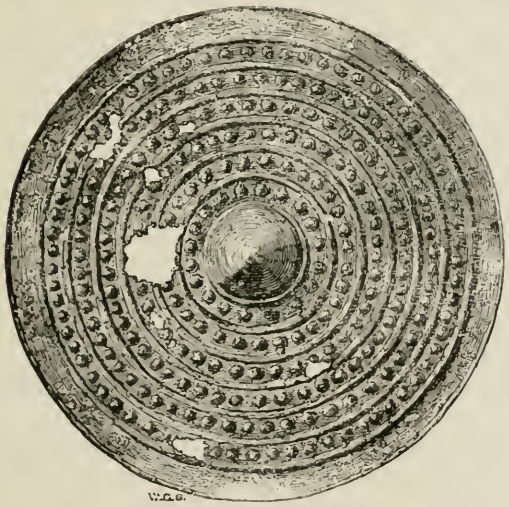


Fig. 260.—Front view of Bronze Shield, from Lough Gur.
(Diameter, twenty-eight inches.)

bronze may be viewed rather as ornamentation than as rendering the shield impenetrable. In the Museum of Antiquities at Edinburgh may be seen bronze shields of similar character. Bronze umbos or bosses have been found on the sites of some lake-dwellings, and in

the collection of antiquities of the Royal Irish Academy there are several embossed circular thin plates apparently formed for the decoration of shields.

The conclusion may be drawn that the thin covering of bronze must be accounted a progressive and therefore later development. At first, studs and circles of bronze were probably affixed to the wooden or leathern material of which the shield was formed, for the purpose of strengthening it, and not merely for ornamental purposes, as in the foregoing example. That the Irish of about the tenth century still used round shields of the character just described is proved by their being carried by armed men both on foot and horseback, as sculptured on the earliest stone crosses.

A comparison of the Irish shield with one found in the year 1837, near Yetholin, Roxburgshire, will show how nearly alike they are in almost every particular. It is remarkable how small the grasp of the handle is in both, agreeing with the evidence afforded by the hilts of bronze swords found in Ireland, that the men who used them were probably a small-handed race.

There is little doubt that dried hides of cattle were employed by warriors not only to cover their shields, but also as a kind of defensive armour.

Two dozen pairs, of what are styled bronze 'shoes', were found close to a carn near the Giants' Causeway. Unfortunately, no illustrations of these articles are given; but from the descriptions, it is evident that, for whatever purpose they were designed, it was not for shoes.* A paper was subsequently written by J. R. Garstin, M.R.I.A., identifying a bronze shoe-shaped object as forming portion of an ancient Irish crozier.

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* *Proceedings R.I.A.*, vol. v., pp. 27–29.

From a remote period up to comparatively recent times, coverings for the feet were made from raw hide. In a rare pamphlet, entitled 'Beware the Cat,' it is stated that these brogues or shoes were fitted to the foot by means of a piece of the hide laced on while yet fresh from the carcass. So late as the reign of Charles II., Thomas Dinley, in his tour through Ireland, noticed that the country people, in some parts, used these brogues, made of raw hide or untanned leather. Articles of this kind were worn down to a very late period. Some specimens have been figured and described in the *Catalogue, R.I.A.*, and in the *Lake-Dwellings of Ireland*.

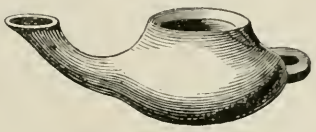


Fig. 260A.

Bronze Lamp, from the Lake-dwelling of Cloonfinlough. Late period. (About one-third real size.)

Amongst the bronze relics recovered from the site of a lake-dwelling in Cloonfinlough, county Roscommon, not the least remarkable was a lamp, of which fig. 260A affords a correct idea. It measures, in extreme length, four inches and five-eighths; the bottom was perforated, evidently for the admission of a support, or stand, up or down which the lamp could have been slid, to suit the convenience of anyone using it: the aperture has been covered by a small plate of iron, a very good proof, if proof be necessary, that many bronze articles are of the Iron Age. There is another very similar lamp in the Museum, Royal Irish Academy. The design is graceful and classic, so much so, indeed, as to suggest the idea that these objects may have formed portion of a spoil taken from Britain, at a time while Roman influence prevailed there.

From the most remote times, lamps composed of different materials appear to have been in use. The fragmentary remains of one, formed of earthenware, were discovered on the site of a primitive sea-shore settlement (p. 354); and in a lake-dwelling in the north of Ireland a lamp of iron was found.

There are also many classes of small objects of bronze supposed to have been used for toilet purposes, such as tweezers, razors, dress-fasteners or latchets, so called, also piscatory implements, &c. The razors deserve particular attention, as they appear to closely resemble articles found in the lake-dwellings of Central Europe.

Fig. 261.

Figure playing a straight musical instrument. (From sculpturing on a cross at Monasterboice.)

In essaying to elucidate the use of an object of the Bronze Age, it is often needful to turn to the Iron Age, for the purpose of drawing some parallel to the antique under observation, and thus, in order to throw light on the past, one may advance research from Pagan into Christian times. It is not probable that the introduction of the New Faith brought in its train any very sudden and revolutionary change in the common everyday life of the inhabitants, or altered, to any great extent, their ordinary means of amusement; for this reason, therefore, it is extremely probable that the musical instruments represented on early Irish Crosses may have been identical in shape and character with those used in pre-Christian times.

Figure 261 represents a seated figure, playing on a musical instrument which is straight, with an expansion at the end; there is also a bearded man with what resembles a three-pronged fork.

Figures 262, 263, 264 are figures playing on harps. The first holds a very large and modern-looking one, the second rests a diminutive harp on his lap, whilst the third, evidently a female, is reposing in a most uncomfortable attitude on a nondescript animal, and is playing on a square-shaped stringed instrument. Behind the musician in fig. 263, stand two others, the one playing on a straight instrument, as in fig. 261, the other blowing one with three separate tubes. Attention may be directed to a bird perched on the harp in fig. 263. In the Irish story of 'The Banquet of *Dun-na n-Gedh*,' the manner in which a warrior gradually lashed himself into a frenzy is depicted; finally, 'his heroic

Fig. 262.

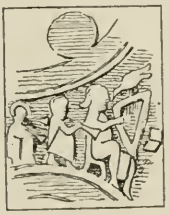


Fig. 263.

Fig. 264.

Figs. 262–264.—Figures playing harps, &c. (From sculpturings on crosses at Monasterboice.)

fury rose, and his bird of valour fluttered over him, and he distinguished not friend from foe at that time.' Here the Berserker-like frenzy is typified by a 'bird of valour': may not the bird on the harp in figure 263 be a manner of depicting the poetic frenzy of the musician? The harp was the favourite instrument of the upper classes. Amongst varieties of music was a kind of chorus: a refrain sung only by women, and martial music produced by the clashing together of weapons.

Mention is made in Irish manuscripts of many musical

instruments not in use at present; all the trumpets that have been found, as far as is at present known, are curved.

Antiquaries divide bronze trumpets into two classes, those which were blown from the ends; and those with lateral openings and closed at the smaller extremity; the two lower trumpets in figure 265 are typical of the first class, the three smaller horns, at top of the illustration, of the second class. These instruments were both cast and riveted; figure 266 represents the manner in which

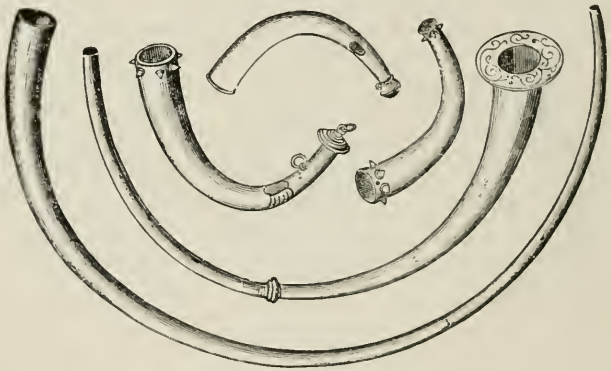


Fig. 265.—Bronze trumpets and horns, in the Collection of the Royal Irish Academy. The largest trumpet is eight feet six inches along the convex margin; the other instruments are drawn in proportion.

the largest trumpet in the group in figure 265 was fastened; the riveting of the edges is 'the most perfect yet discovered.'

There can be little doubt that bronze trumpets were made in Ireland. Their material, peculiar form, the fact that perfectly similar instruments are not found in other countries, afford strong presumptive evidence that

they are the outcome of home manufacture. Spear-heads and axes were cast in this country, for the stone moulds in which they were formed are found, whilst the various articles presented to observation in the collection of antiquities from Dowris enable us to class the trumpets with other bronze implements undoubtedly of native manufacture. Among trumpets there are many which present forms and types peculiar to Erin. Whether its geographical position, and its exemption from the influence of Roman dominion may have tended to preserve in the island, longer than elsewhere, the remains of a former semi-civilization, or whether the peculiar forms of these instruments are to be attributed to the influx of strangers, or to the numerous invaders who successively landed on its shores are questions that remain still debateable; not so, however, is the approximate period of bronze defensive armour, shields, and musical instruments, which may all be relegated to a comparatively recent period, in which the use of bronze and iron overlapped and commingled.*

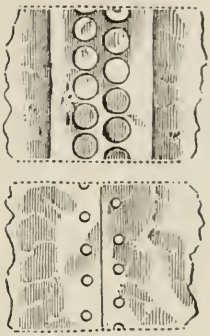


Fig. 266.

Riveting of the edges of the largest trumpet in fig. 265. (Full size.)

* The historian Polybius, whose descriptions of ancient manners are considered trustworthy, thus graphically depicts an incident in the war between the Romans and the Celts:—'The parade and tumult of the army of the Celts terrified the Romans; for there was amongst them an infinite number of horns and trumpets, which, with the shouts of the whole army in concert, made a clamour so terrible and so loud, that every surrounding echo was awakened, and all the adjacent country seemed to join in the terrible din.' Livy alludes to this clamour in more general terms.

CHAPTER XI.

GOLD.

LITTLE attention has hitherto been directed towards ascertaining whether ornaments buried with the dead were formed of materials foreign to the district, *i. e.* whether distant as well as local barter existed. Any evidence thus obtained is unimpeachable, for, as remarks a quaint old author, 'When the funeral pyre was out, and the last valediction over, men took a lasting adieu of their interred friends, little expecting the curiosity of future ages should comment on their ashes.'

Articles made of gold, of peculiar form, some of unknown or doubtful use, but all of unquestionable antiquity, have been found, during a period of many centuries, not only singly, but sometimes in large quantities and in great profusion throughout Ireland. Kemble observed that, 'with the sole exception of the museums of Scandinavia, there is scarcely one European collection which shows anything like so great a wealth of personal ornaments formed of the precious metal, as Ireland.' A great number of golden ornaments of various kinds were presented by the early Christians as offerings to the Church. St. Patrick in his 'Confessio,' thus alludes to the custom:—'I have endeavoured to be on my guard, even with Christian brethren, and Virgins of Christ, and religious women, who, of

their own accord, used to bestow gifts upon me, and to place their ornaments on the altar; but I returned them again to them.'*

From the earliest period of mythical history witness is borne to the abundance of gold in the country, yet the accounts appear contradictory; for we are informed that 'Iban was the first importer of gold,' whilst another merchant was drowned 'while conveying gold-dust to Ireland from Spain.' One of the earliest monarchs of the Milesian race was (it is alleged) Tighearnmas; in his reign gold was first discovered; he had a celebrated artificer, who prosecuted his smelting labours in *Airthir-Liffe*—a remarkable statement—this district having been generally identified by topographers as one on the banks of the Liffey, on the borders of Wicklow and Wexford, where native gold is still found. The supply, then apparent, was probably in course of time exhausted, in the same way that surface gold in Australia has been, in a very short period, worked out. It has been remarked that gold is the first harvest of a newly discovered country, the crop required time however to again arrive at maturity, it required time for the disintegration of the rocks and the deposition of their more precious parts, in the beds of streams, rolled down from the heights by mountain floods. This is corroborated by the observation of G. H. Kinahan that 'most of the gold seems to be abraded, and more or less worn by attrition; but some of it is frosted, and has an appearance as if it grew in the drift, similar to some of the gold that occurs in the *deep placers* in California. All the Wicklow mines are *shallow placers*, the deepest working being less than fifty feet. As the gold occurs in so many of the tributary

* *The Epistles and Hymns of St. Patrick:* Rev. T. Oldham.

streams, it ought, also, as is the case in other gold regions, to be found under the deep alluvia of the rivers. Those, however, have never been mined, but it does not appear at all improbable that a quantity of gold may exist in *deep placers* beneath the river and estuarine gravels, at Woodenbridge and other places in the Vale of Avoca.'

It is evident also that in Australia, in the Colony of Victoria, the deposit of gold in drift has been going on for a long period. In the same locality there are occasionally three distinct gold-bearing strata, lying one over the other, and, as a general rule, the heaviest deposits and largest nuggets are found at the base of whichever stratum happens to rest, at any given point, on the old rocks.

The most uncultured savage, remarks Sir William Wilde, 'lighting on a glittering gold nugget, would naturally add it to his string of decorations, and then by simply hammering it between two stones, could flatten and shape it into any form he pleased. Thence by accident, or his own ingenuity, he might learn how to smelt so very fusible, as well as ductile and malleable a metal, and thus the second stage would have been achieved. Therefore, where gold existed, it may fairly be presumed that it was the metal with which men first became acquainted, and once upon the high road to discovery there was no limit (by means of the hammer and crucible) to the extent to which gold might be worked.'

It is, indeed, stated that gold had, at an early period, been extracted from the copper mines of Wicklow, but for a long time no mention occurs (as far as can be ascertained) with regard to the auriferous produce of the district, either in Irish or other early records; yet in the meantime Nature was slowly but surely disintegrating the auriferous rock, and

washing the precious metal down the mountain sides. For many years prior to 1795 gold had been found by the neighbouring peasantry in the Ballinvally stream*—a tributary of the Avoca—and surreptitiously disposed of in Dublin; in two months preceding the occupation of the place by the military in 1796 no less than 2500 ounces of gold had been washed; subsequent operations by the Government proved unremunerative, and the locality was again abandoned to individual exertions. Gold was

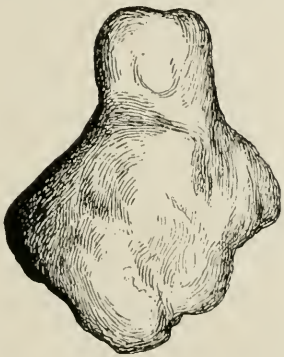


Fig. 266A.—Gold nugget, weighing 22 ounces (value £84), from Croghan, Kinshellagh, Co. Wicklow. Drawn by W. F. Wakeman. (Half real size.)

found in large lumps and also in smaller pieces down to the minutest grain; one nugget weighed twenty-two, another nine ounces, the first (fig. 266 A) was sold for eighty guineas. It has been ascertained from the Dublin

* Diodorus states that in Gaul gold was also procured from the streams without the trouble of mining; whilst Strabo informs us that in Spain gold was not only dug from the bowels of the earth, but collected in the river beds, the sand containing the auriferous deposit being washed down from the mountains by the streams and torrents.

goldsmiths that they, for many years, purchased to the extent of about £2000 worth annually.

The re-discovery of the Wicklow gold fields is attributed to a poor schoolmaster who, while fishing in one of the small streams which descend from the mountains, picked up a piece of the shining metal, and gradually enriched himself by the success of his subsequent searches. He preserved the secret upwards of twenty years, but he then married and imprudently confided his discovery to his young wife who, believing him to have suddenly become deranged, immediately repeated his disclosure to her relations, through whom it was made public. An amusing farce has been founded on this incident.

Besides the Wicklow district there are other localities in which gold in small quantities has been found, in Wexford, and Kildare, in Derry, Tyrone, and Antrim.*

As gold was used by the ancient inhabitants of Ireland, and it is not likely that they obtained it by importation, for the ports and creeks of the eastern coast of Ireland were well known to the early trading communities; and as the nations that trafficked with the country during the prehistoric period must, from their being able to construct large sea-going ships, have enjoyed a superior state of civilization to that of the Irish, we may reasonably conclude that gold was found in the land; for it is seldom that people of superior civilization barter gold to those of an inferior state of progress. On the contrary, it is generally barbarous races that barter gold for the

* 'Gold has been got principally by *streaming or placer minery*, being found in diluvium near Slieveanorra, county Antrim; in the Moyola river, county Londonderry; in the Dodder, county Dublin; and in different tributaries of the Ovoca, county Wicklow. Of the finds in Antrim and Londonderry little is known.'—*Geology of Ireland*, p. 339. G. H. Kinahan.

manufactures and productions of the more civilized, and the simple circumstance of Ireland being a country plentiful in gold, would, at a very early period, draw commerce to her from other nations. Examine public and private collections of golden antiquities, or turn over the pages of antiquarian publications, and note the quantity of articles of this nature which have been described and portrayed in their pages. Many writers have assigned to them a Phœnician, Greek, Hebrew, Gaulish, Spanish, and even Danish origin, but, as Sir William Wilde remarked when summing up the reasons on which reliance could be placed as to their native production :—'As none of the asserters of these theories have offered any tangible exposition of them, it is here unnecessary to discuss their merits.'

The subject of Ireland being more or less a gold producing country has been gone into, simply to show that it is almost certain that the gold ornaments found in such abundance were made from the precious metal found in her streams, and were not imported from the Continent.

The admixture of alloy by these early gold-workers, if such took place beyond that formed in its natural state, or acquired by frequent working, shows a great amount of metallurgic knowledge in the craftsmen by whom it was employed. The alloy is generally silver, and a little copper; if the former predominates, the gold is yellowish in colour; if the latter, its hue is redder. From assays which have been made it appears that the metal is, in general, slightly below the present standard, varying from eighteen to twenty-one carats, though in a few of the very thin plates it has been ascertained to be as high as twenty-one and a half carats, but in no instance is it perfectly pure. On an average, therefore,

its intrinsic value per ounce is slightly less than that of mint gold. The antiquarian value is usually £4 per ounce; this amount increasing in proportion to the rarity of the article or its ornamentation. Before the year 1861, owing to the law of 'Treasure Trove,' by which all discoveries of hidden valuables were claimed by the Crown, the majority of these articles were consigned to the smelting-pot—the final grave of so many precious antiquities; and of those offered for sale, the precise locality or circumstances of the discovery, in general, remained unknown. Under the present law, the discoverer of a valuable antique, upon depositing it in proper custody, is given a receipt, by which he is guaranteed the restitution of the article if it be not required for a public museum; or, if retained, he is to receive the full value, not merely its marketable, or bullion value, but its antiquarian price.

Many gold ornaments were, on first discovery, cut into several pieces, for convenience of stowage, and to facilitate disposal to local jewellers. One collector would obtain possession of one portion, his neighbour of another; several articles in the Museum R. I. A. were thus bought in fragments.

Ridiculous mistakes were, however, frequently made, gold being often regarded as brass, and bronze taken for gold. A strip was cut off gold to make a nose-ring for a pig, and a bronze axe, which came into the writer's possession, was at first supposed by its peasant discoverer to be '*rale goold*,' and it was not till after repeated failures to effect a sale of his 'find' as gold that he could be convinced of the real nature of the metal.

The records of discoveries of ornaments in the precious metal which are at present attainable belong

mostly to the last three centuries. As it is in this period that the attention of writers seems to have been first directed to the subject, these records embrace a very small proportion of the actual discoveries, and are to be found scattered throughout the pages of works relating to Archæology, the History of Ireland, the Proceedings and Transactions of learned societies, and the columns of newspapers; the discoveries appear to consist principally of articles connected with personal adornment. These records, although comparatively meagre and limited, yet afford a reliable basis for the speculations and conclusions of those who seek to elucidate the subject. A few details are given of some of the largest and most interesting discoveries, but the mere enumeration of small finds would fill pages, and be of no interest to the general reader.

One of the best known and earliest notices of a gold article is the account of the discovery in a bog of a bridle-bit of solid gold, weighing upwards of 10 ounces, and sent as a present to Charles I., by Strafford, during his administration of the Government of Ireland. Earlier discoveries, have been given in a vague and even misleading manner; but attention may be drawn to two curious legal depositions—sworn to in the year 1673—relative to the finding and subsequent theft of several antique gold ornaments; the precious metal is described as 'Arabian gold'! which implies a belief, at that time existing, that it was introduced into Ireland from the East.

The learned antiquary and traveller, Richard Pococke, Bishop of Meath, is the first recorded collector of Irish antiquities. In the year 1757 he communicated 'An Account of some Antiquities found in Ireland' to the London Society of Antiquaries, and it was long subse-

quently published in the second volume of the 'Archæologia.' After his death, in 1765, the greater portion of his collection passed into the keeping of his chaplain, the Rev. Mervyn Archdall, rector of Slane, and author of *Monasticon Hibernicum*. Many of the best specimens were drawn by the celebrated artist and antiquary Gabriel Beranger; several were engraved, and figure in Vallencey's *Collectanea*. Between the years 1731 and 1774 numerous golden ornaments of great variety, both in size and decoration, were discovered in the bog of Cullen, near the town of Tipperary; O'Curry alleges that in ancient times this locality was reputed to have been the abode of a colony of gold workers, and popular legends amongst the peasantry pointed to concealed riches being covered by the peat; indeed, more gold ornaments are turned up by the turf-cutter than in any other way—if the celebrated 'Clare find,' be excepted. This great discovery, *i.e.* the 'Clare find' was made in the month of March, 1854, during the construction of the Limerick and Ennis line of railway. It was evidently a hoard that had been hastily concealed in a stone chamber under a carn of slight elevation, near the lake of Mooghaun, or Loughatraska, parish of Toomfinlough—about two miles from Newmarket-on-Fergus. One of the labourers on the railway remained on this spot, whilst his companions had gone to their dinner, and he amused himself by turning over and examining some of the articles in the newly-opened cist, and flinging them into the lake. One of the navvies who had in the meantime returned, took a few specimens into the village, where he had them examined, and they were pronounced to be gold. A general rush was made to the place, a fierce scramble ensued, and it is stated that an almost incredible

quantity of the precious metal was exhumed: indeed so large was the deposit that wheel-barrows were employed in carrying it off, and men were seen with their hats filled, and women with their aprons laden with it. Four labourers left for America shortly afterwards, and they were reputed to have each taken with them £1000; one goldsmith in Limerick purchased to the value of £300, the Royal Irish Academy about the same amount, the Rev. Dr. Neligan £60. The British Museum and many private collections have been enriched by this find, but there is reason to fear that the larger portion found its way to the melting-pot. Lord Talbot de Malahide, in a paper upon the subject, read by him at a meeting of the Cambridge Archæological Society, pronounced that the gold of which these ornaments were composed came from the Wicklow Mountains. Most of the articles were much twisted and battered, evidently with the intention of forcing them to fit into a small space. Probably this hoard was obtained in some battle or plundering foray, and the spoilers were doubtless defeated, as they did not return for it. This portion of the ancient territory of Thomond was the scene of a great struggle between the Norsemen and the Irish, and it has been suggested that the gold was the spoil taken from the Irish by the Danes, and had been there deposited, by the latter people, before their final expulsion from that part of Ireland. Had it been concealed by the Irish, the knowledge of the circumstance would most likely have been preserved by some individual.

Mr. Clibborn, the then curator of the Royal Irish Academy, in a letter contained in *The Athenæum* of the year 1860, mentioned a discovery near Athlone, that was altogether lost to science, but which realized

£27,000. In the same locality several articles of gold, found early in the present century, were sold to a jeweller in Dublin for £858, and for want of a purchaser of antiquarian tastes were melted down. In *Letters on Antrim*, the writer states that (within his own knowledge) golden ornaments to the value of £1000 had been found in bogs. In his *Dress of the Irish*, Walker mentions a corslet of pure gold found near Lismore, which was bought by a Cork goldsmith for £600. The foregoing are simply examples of the largest recorded finds of hidden treasure, and so far it would appear as if the southern half of Ireland had been more prolific in discoveries than the northern. Scattered broadcast over the country, it would appear that in general gold articles were hidden in haste, and possibly at a time when the foe pressed hotly at the heels of the vanquished. Wilde also was of opinion that very slight authentic evidence of gold having been discovered with the dead (as so frequently occurs in other countries), was procurable; but perhaps at this conclusion he may have arrived too hastily, for during the centuries in which the northern freebooters devastated the Irish coasts, they appear to have been well acquainted with the custom of the burial of valuables in tombs, and the 'Irish Annals' record their breaking into, and rifling several of the most notable.

Coverings of thin wrought-gold appear to have been occasionally laid on the dead. In 'a cavern' accidentally opened in 1805, near Castlemartyr, county Cork, was found a human skeleton partly covered with exceedingly thin plates of stamped, or embossed gold connected by bits of wire. One of these plates, bearing a kind of herring-bone ornamentation, was rescued, the remainder of the gold was all sold and melted down.

What appears to have been a somewhat similar discovery occurred in an ancient grave in Ahavalley, situated also in the county Cork. The finder exhibited a portion of it, crumpled up for convenience of carriage, and stated that it formed but a small portion of what covered, like a sheet, the breast of a skeleton. With it was found a specimen of 'gold ring-money,' which was purchased; the remainder was all melted down. Small circular boxes (fig. 267), supposed by some to have been used for mortuary purposes, have been occasionally found, and are represented by several specimens in the Collection belonging to the Royal Irish Academy. One

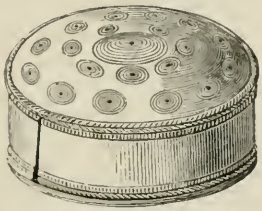


Fig. 267.—Gold Cinerary Case. (Half real size.)

shown at the Dublin Exhibition of 1853 was described as a cinerary box, and when found, contained a fibula.

Two unclosed rings (figs. 268, 269) in the Collection of the Royal Irish Academy were found in cinerary urns. The core is lead, covered on the outside with ornamented gold plates, and each ring narrows towards the cleft part. Small circular gold plates are by no means of rare occurrence, they are remarkably thin, and very rudely decorated. They are often found in pairs, bear generally a broad cruciform ornament, and are pierced with two small holes, as if for attachment to the dress. These ornaments may, perhaps, be classed as early Christian, yet their burial with the dead would seem to point to

the continuance of a Christianised pagan custom; therefore, it may not be out of place to record the discovery in the last century of two of these gold discs under remarkable circumstances. The Bishop of Derry being at dinner at Ballyshannon, 'there came in an old Irish harper, and sang an old song to his harp. His Lordship, not understanding Irish, was at a loss to know the meaning of the song; but upon enquiring he found the substance of it to be this, that in such a place, naming the very spot, a man of gigantic stature lay buried, and that over his breast and back were plates of pure gold, and on his fingers rings of gold so large that an ordinary man might creep through them.' The place of sepulture was so minutely described that some persons who heard the harper's song set to work at once, and dug into the grave, where they found 'two thin pieces of gold, circular, and more than two inches in diameter.' No other article of value was discovered. A representation of one of the plates found in this extraordinary manner is given in Gibson's *Camden* (fig. 270), and resembles a specimen figured in the

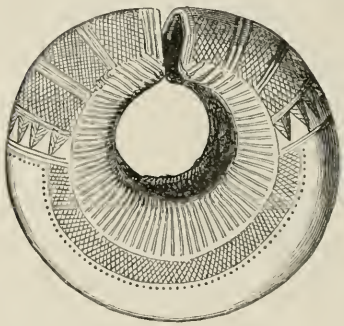


Fig. 268.

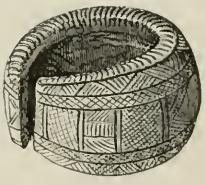


Fig. 269.

Figs. 268 and 269.—Unclosed Lead Rings, covered with thin gold plates; said to have been found in cinerary urns. (Full size.)

Catalogue of the Royal Irish Academy. It has been conjectured that the Irish poem which suggested the discovery was one which Dr. Drummond translates as follows :—

> ' In earth, beside the loud cascade,
> The son of Sora's king we laid ;
> And on each finger placed a ring
> Of gold, by mandate of our king.'

As the excavation in search of the gold was, it appears, done at once, *i.e.* the same evening, the site of the grave must have been in the immediate vicinity of Ballyshannon. The word translated by Dr. Drummond as 'Cascade' (*Eas*) is the first part of the word Assaroe (*Eas-ruadh*), a remarkable waterfall at Ballyshannon, now known as the Salmon Leap. However, it must be admitted that in the poem there is no mention made of plates of gold.

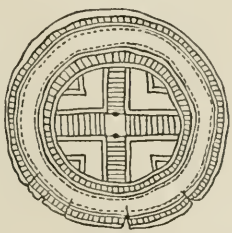


Fig. 270.

Gold Disc, found with a skeleton, near Ballyshannon. (Half real size.)

In the *Collectanea Antiqua*, by C. R. Smith, several instances are mentioned of the discovery of gold plates, and he gives a representation of one somewhat smaller, but otherwise almost identical with the Ballyshannon example. Another of the same class has been drawn and described by Petrie, who states that the figures of the kings sculptured on the great cross at Clonmacnoise are represented with round plates of this description on the breast. After close examination it is believed that these represent not gold plates, but large brooches.

Fig. 271 represents a design on a fragment of pottery found on the site of a lake-dwelling in Laibach-Moor, Upper Austria, which appears to have existed in the Stone and Bronze Period, long before the commencement of the Christian era. It is a good example of a pre-Christian cross, and closely resembles the Irish example impressed on gold (fig. 270).

Enough evidence has probably been now given to convince an unbiassed enquirer that gold was in Erin, and conformably to the usages of ancient times, occasionally buried with the dead.

Several specimens of what probably an observer would identify as golden umbos for shields, or bowls with overhanging rims, have occasionally been found either entire or in fragments. One, somewhat resembling a small hat, is represented in the Catalogue of gold-remains belonging to the Royal Irish Academy. It is, however, only $4\frac{3}{4}$ inches in diameter, and weighs 1 oz. 2 dwts. 2 grs.

Fig. 271.
Ornament on pre-Christian pottery, from Laibach Moor, Upper Austria. (Two-thirds real size.)

There had long been a dispute amongst 'historians' as to whether the ancient kings of Ireland wore crowns of gold like the rulers of other nations. In no instance, however, did the chiefs of olden times do so; their symbol of office was a wand; the first attempt at a crown may have been a gold fillet worn in the hair. In the year 1692, while some workmen were digging turf at a place called 'The Devil's Bit' (situated in the Co. Tipperary), they came upon an article of gold which weighed 5 oz., and which is figured in Keating's *History of Ireland* (fig. 272). Unfortunately the dimensions are not given

and it is not known if it be still in existence. If the representations of this antique be reversed from the manner in which they are given, it will be perceived that it closely resembles certain metallic utensils—which have been found on the sites of lake dwellings, the bottoms of which were rounded, they being intended for suspension over the fire, and not to be left resting on it. Primitive craftsmen were very conservative in their designs; bronze axes were at first imitations of flint implements, and it would appear as if this golden article were but a reproduction of a utensil made of ordinary materials. One of somewhat similar style, but formed of wood, was dug up in a lake-dwelling.

Fig. 272.—Golden Ornament. (Weight. 5 oz. No dimensions given.)

There are in the Copenhagen Museum some thin golden vessels highly ornamented, which were found suspended in ancient tombs. If the drawing of the so-called Irish crown be reversed, and placed beside one of these northern vessels, the resemblance is very striking; or if the latter be reversed, it quite as much resembles a cap or crown.

In the pages of *Punch's* caricatures, during the period of agitation for 'Repeal of the Union,' the figure of Daniel O'Connell may be observed with this inverted utensil doing duty as a crown upon his head.

This shape of ornament is repeated in wooden and

bronze vessels, and it may be seen even in bronze pins. Fig. 273 presents a good example; it is a shield-pin, in which the central boss has encroached upon the shield, so as to leave but a narrow rim around it.

Thin crescentic plates, with the extremities terminating in small, flat, circular discs, are the gold ornaments most frequently discovered, and that in which the type in shape, size, and style of decoration is most decidedly fixed; it is manifest from the numbers found that they were in frequent use in early times. Some antiquaries assert that they were hung round the neck like gorgets; others believe that they were placed upright on the head, with the flat terminal plates applied behind the ears; the inner circle, or cut-out portion was probably made to fit the head of the owner, as it differs in every specimen, both in size and shape. In form they are identical with the half-moon-shaped ornaments in use among the Greeks and Romans, with the nimbi on carvings and pictures of the Byzantine school, and they differ but little from the ring which now is conventionally placed around the head of a 'saint'; thus this 'glory' can be traced back to pagandom; the crescentic plate appears to have been primarily the badge of some distinguished person, a chief, or king, then it became the emblem of one considered to be a very holy person, for in Ireland, in the early days of Christianity, the saints were derived principally from the aristocracy.

Fig. 273. Bronze Pin, with head resembling fig. 272. (Half real size.)

Fig. 274 is the head of a Byzantine 'saint.' Fig. 275, from a compartment on the west side of the north cross at Clonmacnoise, represents three figures, apparently

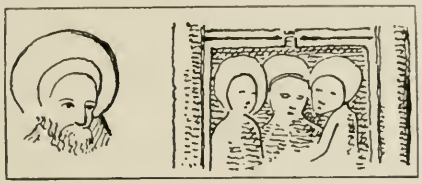


Fig. 274.—Head of Byzantine 'saint' with 'glory.'
Fig. 275.—Three figures from a Cross at Clonmacnoise, apparently with gold Discs round their heads.

with gold ornaments round their heads. Fig. 276, a perfect and beautifully decorated specimen of the thin gold plate or 'nimbus' style of ornament, is 7 inches in

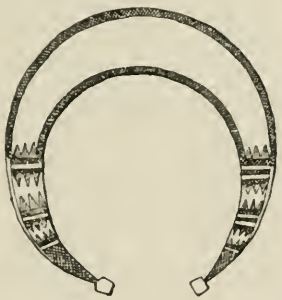


Fig. 276.—Thin gold Plate, supposed to have been used as a Head Ornament. (About one-fifth real size.)

height, nearly the same across, and weighs but 18 dwts. 2 grs.

Very similar articles to the 'nimbi,' semi-oval in form, and elaborately chased and embossed, also formed of thin plates of gold, have been found, but they are not

so numerous. The description of the 'nimbi' applies also to this class, styled diadems or tiaras, supposed to be but a development of the former. They vary in weight from 4 to 16 ounces, average 11 inches across from out to out, and 5 inches in the clear of the open portion. Both in design and execution, they are undoubtedly the most magnificent specimens of antique gold work which have as yet been discovered. Whether they formed the head-dresses of chiefs in pagan and early Christian times is, in the present state of our knowledge, undetermined. The general design is in all the same, but in each differs slightly in ornamental details. The object, fig. 277, in the Collection of the Royal

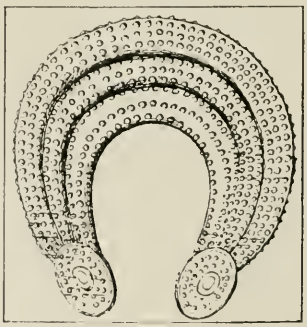


Fig. 277.—Thin gold Plate, styled a Diadem or Tiara, supposed to have been used as a head ornament. (About one-eighth real size.)

Irish Academy, is said to have been found in the county Clare. It is composed of reddish-coloured gold, weighs upwards of sixteen ounces, and is the finest specimen of its class ever discovered in Ireland, or probably elsewhere; it is almost a foot in height, and the same in breadth.

In an Irish MS., believed to be of the eighth or ninth

century, the word *mind* glosses the Latin term *diadema*. In the *Vision of Adamnan* the 'large arch above the head of the Illustrious One' is compared to the '*mind* of a king,' and in *Leabhar-na-h-Uidhre* it is recounted that the King of Tara, being seated in state, with all his court around him, one of his wives had the *cathbarr* or *mind* of gold, which her rival constantly wore to conceal her baldness, snatched from her head, and so tried to expose her to public derision. From these extracts it is evident that at the time they were first

Fig. 278.—Golden Gorget, twenty-one inches across its convex margin. (Weighs upwards of 7 ozs.)

written the term *cathbarr*, or *mind*, as applied to a certain class of gold ornaments, was then well understood, but what they were it is perhaps impossible now to decide.

It is comparatively of recent date that what are now styled gorgets or neck collars (fig. 278), have been discovered; they appear to have been represented in considerable numbers in the 'Clare find.' At one time the only specimens to be seen in the public antiquarian museums of Europe were those belonging to the Royal Irish Academy.

More golden torques have been found in Ireland than in any other country in Europe, though these ornaments were known to, and worn by the ancient inhabitants of Asia, by the 'Barbarians,' and latterly by the Romans. The term torque is applied to a ring of twisted metal, generally of gold, and worn either on the neck, round the waist, across the breast, or as a bracelet or finger ring. The simplest form is that of a square bar twisted so as to present a rope-like appearance. In the more complex forms, two or more flat strips of metal, joined

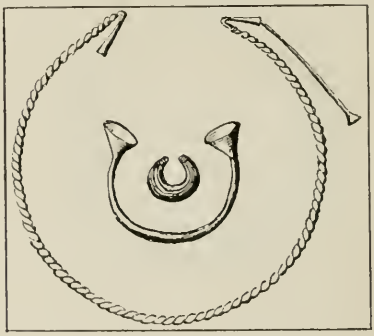


Fig. 279—Twisted Torque of gold (five feet seven inches long), and penannular ornaments.

at their inner edges, are twisted together in a spiral manner. It will be thus seen that torques are of all sizes, from one now in the Collection of the Royal Irish Academy, 5 feet 7 inches in length (fig. 279), to one but a few inches in length. The largest, and outside ornament in fig. 279 was found on Tara Hill, county Meath. It is formed of four flat bars twisted together, as represented in the illustration, and weighs upwards of twenty-seven ounces. It is a very perfect specimen of

primitive goldsmith work, and is said to be the grandest relic of its class as yet known to antiquaries.

The neck torque appears to have been the favourite form of this ornament, and in the celebrated statue of the 'Dying Gladiator,' a 'Barbarian' is represented wearing a neck torque of twisted pattern (fig. 280), terminating at each extremity in a knob; at the back the twisting is nearly obliterated, and it is thought there

Fig. 280.—Bust of 'Dying Gladiator,' or 'Barbarian,' showing Torque round neck.

are traces of some hinge arrangement. If such be the case it differs from Irish specimens. Byron's lines on the statue are too well known to quote; not so Virgil's allusion (*Æneid*, viii. 660*) to the practice of wearing

* 'Galli per dumos aderant, ...
. . . . . .
Aurea caesaries ollis, atque aurea vestis;
Virgatis lucent sagulis; tum lactea colla
Auro innectuntur.'

'The Gauls were advancing along the thickets . . . . . of gold

this neck ornament. According to Strabo, the Druids of Gaul wore golden torques and bracelets, so it may be inferred that Irish Druids had similar ornaments.

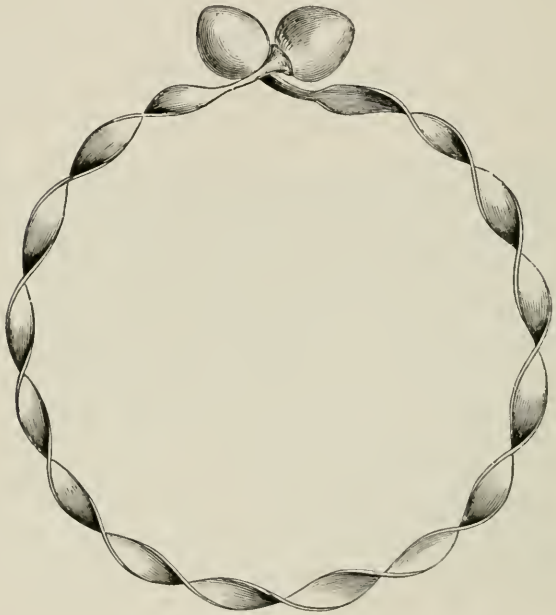


Fig. 281.—Flat and loosely twisted Torque, alleged to have been found with fig. 292. (Half real size.)

The term 'torque,' by which they are usually designated, is one that frequently occurs in classic writers. It is supposed to have been borrowed from the Celtic word *torc*, which was used to denote a twisted circular

their tresses were, and of gold their vestments; in short striped cloaks they shine; whilst their milk-white necks are girt with gold.'

ornament made of various materials, gold, bronze, iron,* &c.

Although Cæsar describes the tribes inhabiting the south of England as equal, if not superior, in civilisation to their neighbours in Gaul, yet the picture drawn of the prior occupants of the land which they had driven northwards, depicts the inland tribes as in a barbarous condition. As an outward evidence of wealth the Caledonians, at a later period, wore torques, and girdles of iron, and regarded these ornaments in the same way that other peoples esteemed gold—a proof, if any were wanting, that in Caesar's time and long subsequently, iron in the northern parts of Britain was not in general use.

Golden torques seem to have been common to all Celtic nations. It does not, however, appear that in early times they were worn generally by the Romans, and the appellation 'Torquatus' bestowed on Titus Manlius, from the golden torque taken by him from a Gaul, whom he slew, seems to indicate that this ornament was not at that period familiar to the Romans. Livy recounts (lib. 36, c. 40) how Publius Cornelius, after his victory over the tribe of the Boii, collected no less than 1470 torques—weighing 247lbs., from the slain; and Dio Cassius notices a torque worn by the British Queen, Boadicea.

What has been designated 'The Belfast Torque' is said to have been 'found in digging an old ditch in the county Down.' It is an interesting article of its class,

* Caesar states that the Britons used rings formed of iron and copper, as we nowadays employ coined gold and silver; but he is silent as regards the employment by them of the precious metals. Herodian, who lived about A.D. 238, when describing the northern tribes of Britain, says that the natives 'adorn their flanks and necks with iron, considering it an ornament and sign of wealth, just as other barbarians do gold.'

'and substantiates in a most remarkable manner the fact that gold was manufactured in Ireland; for it is still in an unfinished state, and was probably in process of working when lost.' It is a three-leaved torque, believed to have been found perfect; but when brought to a Belfast jeweller consisted of two fragments.

Another class of torques, apparently used for encircling the neck, consists of a plain, flat, thin, and twisted band of gold, generally about half an inch in width, and provided with small hooked terminals, which loop into each other. Fig. 281 is of slightly different type, and has hollow knob-shaped terminals.

The discovery of articles represented by the second interior object (about one-quarter real size) in fig. 279 is of frequent occurrence. They are almost invariably composed of gold, but ex-

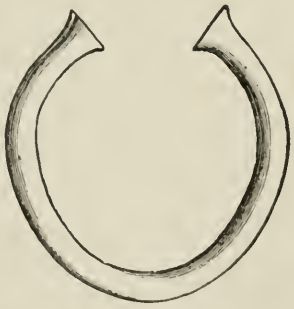


Fig. 282.

Fig. 283.

Fig. 282.—Penannular Ring of pure copper, with cupped terminals. (Half real size.)

Fig. 283.—Bronze Pin, with cup-like head, similar to terminals of gold, copper, and bronze penannular rings. (Half real size.)

amples of copper (fig. 282) and of bronze (fig. 283) may be observed in our public and private museums.

In size they vary considerably, as also in weight and thickness. It has not yet been ascertained how they were used: most antiquaries nowadays regard them as dress fasteners, or ornaments; the older school considered them as a species of ring money. Figure 284 represents an object of this class, found in a bog near the town of Sligo in the year 1874. It was quite perfect, and was purchased for £21 12*s*.

From the simple penannular ring, to one with slightly flattened ends, there is an easy, gradual transition. The terminals continually expand until they develop into

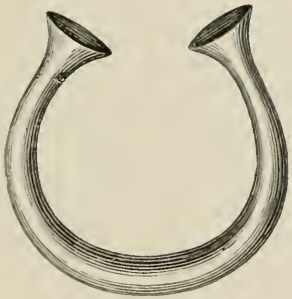


Fig. 284.—Penannular Ring of gold, with cupped terminals. (One-third real size.)

large cups, or flat discs, and as in ringed pins, the ring increases and becomes the most important portion of the article, so in these ornaments the terminals expand to such dimensions, that the portion connecting them, resembling a handle, becomes the least noticeable feature of the ornament. In the fully developed examples which have come under notice, the cupped articles are, in general, highly decorated; in those with flat discs the terminals are, in general, unornamented.

Fig. 285, of the cupped class, with solid handle and massive terminals, weighs 33 ounces, is beautifully

Fig. 285.—Penannular Ring of gold, with large cupped terminals, eight and three-quarter inches long, three and a-half inches high. (One-third real size.)

decorated externally and internally with dot and circle patterns, bands, zigzags, and triangles.

A specimen of the disc class, in the collection of the late T. Crofton Croker, weighed upwards of 5 ounces,

Fig. 285A—Gold ornament with disc terminals. One-half real size. (Reproduced from *Collectanea Antiqua*, vol. 3.)

the plates measuring 2⅝ inches in diameter, the sterling value of the gold being upwards of £20 (fig. 285A).

Fig. 286 is another example, and it resembles those figured in the *Transactions R.I.A.*, *Catalogue R.I.A.*, and in *Etruria Celtica*. Fig. 287 is a good example of a specimen, with cup-shaped terminals, made of copper.

From time to time a number of fanciful ideas have been propounded as to the use for which these ornaments were fabricated, but the sole theory, which has survived criticism, is that they were employed for dress or mantle fasteners. Sometimes the articles are plain, and sometimes highly decorated. They vary in length, from nearly a foot to but half-an-inch.

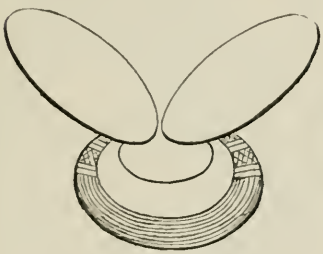


Fig. 286.

Fig. 287.

Fig. 286.—Penannular gold Ring, with thin disc terminals. (Full size.) (Reproduced from *Collectanea Antiqua*, vol. iii.)

Fig. 287.—Penannular copper Ring, with large cup-shaped terminals, found in the Co. Cavan. (Half real size.)

Figure 287A, slightly less than one-half real size, represents a number of gold ornaments, of which the estimated intrinsic value is about £1000. Nos. 1, 2, 3, 9, 10, and 13 are bangles, wristlets, or armlets, some of them plain and some decorated; No. 4 is a bar of gold, evidently an unfinished bangle; Nos. 5, 6, 7, 8, and 14 present varieties of penannular rings with cupped terminals, No. 11 and No. 12 appear to be of the double conical bead class.

Necklaces are not uncommon. One unique example consists of hollow balls, each slightly compressed laterally, and the balls vary greatly in dimension. It is supposed that the smaller were strung round the neck, thence increasing in size as they descend the breast

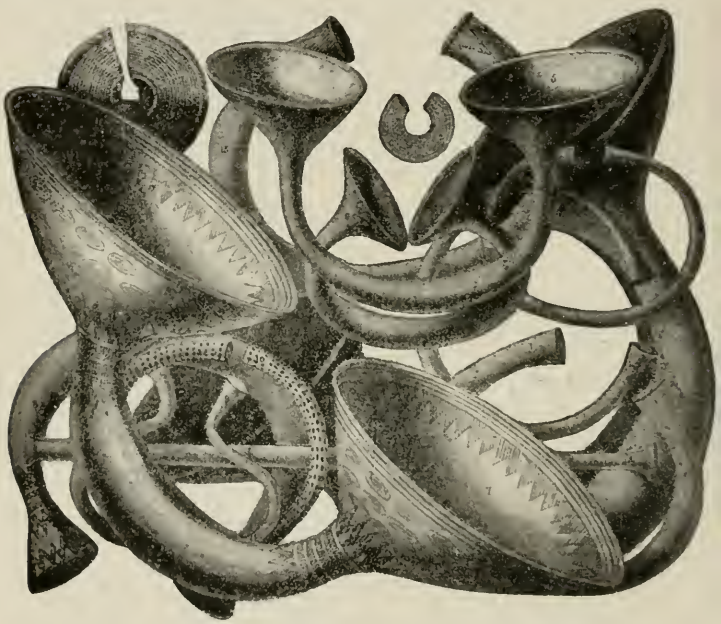


Fig. 287A.—Group of Miscellaneous Gold Ornaments. Total value £1000. Slightly less than one-half real size. (Reproduced from *The Ulster Journal of Archæology*, vol. 8, p 36.)

(fig. 288). It would appear as if some of the gold beads were copies of the primitive necklaces worn in the rudest state of society, composed of shells rubbed on some hard substance to make a second hole for the purpose

of their being strung on vegetable fibre, and used as a necklace.

So-called double conical beads are hollow, with a strong circular rim, from which the thin plates rise on

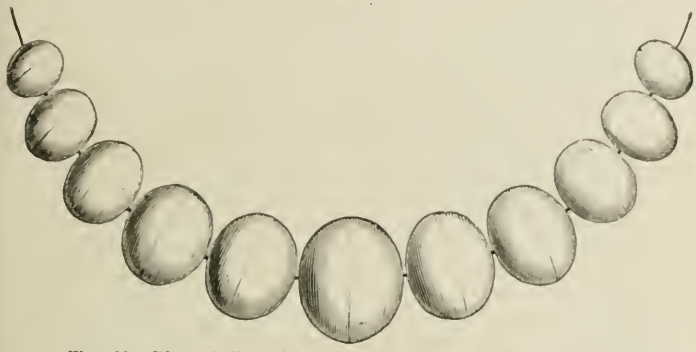


Fig. 288.—Eleven hollow globular gold Beads. (Weight, 20 ozs. 8 dwt. About one-sixth real size.)

each side at an angle to meet the rim of the tube, which, in ordinary beads, affords the means by which

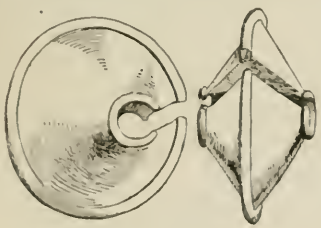


Fig. 289.

Fig. 289A.

Fig. 289.—Plan and section of double conical gold Bead, with side aperture. One-half real size. (Reproduced from *Collectanea Antiqua*, vol. iii.)

Fig. 289A.—Remains of a double conical gold Bead. One-half real size. (Reproduced from *Collectanea Antiqua*, vol. iii.)

they are strung; these specimens are provided, in addition, with a side aperture (fig. 289).

Figure 289A is apparently the remains of a double-conical bead, of which one side is missing. It was presented by T. Crofton Croker to Sir Walter Scott, who, struck by its shape, styled it 'Oberon's bed-room candlestick.'

Fig. 290.

Gold Plate with Hook, probably used as an Ear-ring. (About one-fourth real size.)

Thin gold plates with hooks were probably used as ear-rings (fig. 290). Torque-like ear-rings (fig. 291) and spiral finger rings are also found.

Bracelets are divided into two classes. Perfect or closed rings are of rare occurrence, whilst unclosed examples are found in abundance.

Figure 292 is a gold bracelet or ring, with bulbous ornament, in the Collection of the Royal Irish Academy. It is described as probably of Danish origin, and is said to have been found near Clonmacnoise, together with other articles. Sir William Wilde, however, justly observes that we have not as yet met with, in Ireland, any golden antiquities which appear to have belonged to the northern nations, and this article bears all the impress of an Indian and modern origin.

Fig. 291.

Torque-shaped Ear-ring. (Full size.)

Longitudinal gold-plates, some of them decorated and some plain, are not uncommon.

It has been suggested that these thin plates were employed as ornamental bands for the forehead, the hair,

or the dress. Whether used for the first two purposes remains open to conjecture, but it is certain that they were utilized in adorning the bodies of the dead. In the year 1805, a quarryman, in consequence of his crowbar having fallen through a fissure in the rock at Carrig-a-crump, on the east shore of Cork Harbour,

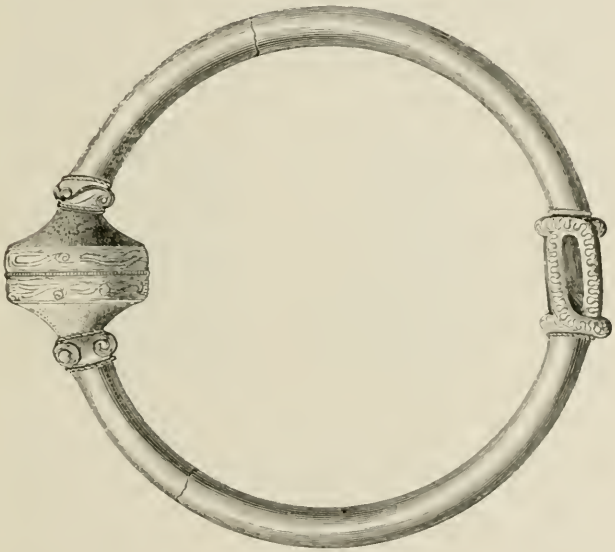


Fig. 202.—Gold Ring, with bulbous Ornament, alleged to have been found near Clonmacnoise, but probably of modern and Indian origin. (One-half real size.)

widened the aperture, and discovered a small hollow, into which he descended. Here he found a human skeleton, covered with small and exceedingly thin plates of gold, ornamented as in fig. 293, and connected

by small pieces of wire. The gold, sold to a local jeweller for upwards of £80, was melted down. These plates closely resemble the coverings of an Egyptian coat-of-mail engraved in *Life in Ancient Egypt* by Adolph Ernan, p. 545.

Breast-pins and brooches are of rare occurrence. Golden ingots have been frequently found, but as they possess little archæological value, few have been preserved.*

The lower portion of the socket of a fine bronze spear-head, decorated with gold, is represented in

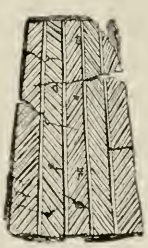


Fig. 293.

Fig. 294.

Fig. 293.—Thin Plate of gold, forming portion of a Corslet covering a human skeleton found in a cave at Carrick-a-crump, Co. Cork. (One-half real size. Reproduced from *Collectanea Antiqua*, vol. iii.)

Fig. 294.—Ferrule of bronze Spear from Lough Gur, showing gold ornamentation. (One-half real size.)

fig. 294. The ferrules at top and bottom are of very thin gold, separated by a band formed of alternate

* 'A rod of pure gold, completely wrought, about twenty-eight inches long and as thick as the middle finger,' evidently a half-formed ornament, is mentioned in the deposition before referred to (p. 483); in the year 1808 a gold rod, weighing upwards of twenty ounces, probably also a half-wrought article, was found near Drumahammond Bridge, county Antrim.

lines of gold and bronze. Sir John Evans draws attention to the fact that the gold ring, or ferrule, around the spear-head of Hector is mentioned by Homer.

On a bronze sword in the Museum R. I. A. traces of gold ornamentation are observable on the handle-plate; also on another similar weapon discovered in 1748, in the bog of Cullen, Co. Tipperary; three years later another sword was dug up, with the handle and pommel plated with thin gold, weighing upwards of three ounces; in 1753 a similarly ornamented sword-handle was discovered. Walker adds that 'golden-hilted swords have been found in great abundance.' A gold ferrule, weighing 6 dwts. 11 grs., was discovered with a bronze dagger.

It has been suggested that there were knaves in these olden times who tried to cheat their confiding customers by passing base rings upon them. Specimens have been discovered, the core consisting of copper, lead, bone, or earthenware, but plated with gold. These penannular rings are generally thick, and of small size, whilst in the sterling articles, the ends do not terminate sharply, but are neatly rounded off and well finished; in the imitation or base articles, although the joining in the gold-plating is not noticeable along its edge or length, it is (in almost all instances) rudely bent in, and hammered over the ends of the core; thus it is thought this class of articles were not forgeries of the olden times, but the craftsman simply utilized the core as a block on which to work the thin gold plating, leaving the terminals ostentatiously unfinished, to avoid the appearance of an attempted deception.

When the Collooney and Enniskillen Railway was in course of construction, there was found, in a cutting,

portion of a strange penannular object. It was embedded in a stratum of peat, resting on gravel, at a depth of about six feet from the surface. The relic consists of a hard earthen-like core, covered with a thin plate of gold, upon which is displayed a variety of dots and scorings (fig. 295). In one of the cists of the Carrowmore Series of Rude Stone Monuments there was a piece of bone, either walrus or cetacean, also bearing a very similar archaic pattern (fig. 296).

Fig. 295.
Fragment of Penannular object, covered with a thin gold plate. (Full size.)

Articles of silver are of comparative rarity in discoveries of Irish antiquities, and the production of silver requires a great amount of metallurgic skill. In Ireland silver may be almost said not to exist in a natural state, if we except the lead mines formerly at the village of Silvermines, near Nenagh, which yielded about three pounds of silver to the ton of lead; there was also a small unproductive vein of silver in the county Sligo, and another in the north of Ireland. The mines near Nenagh were worked so late as the reign of James I., but there were evidences of far earlier operations.

About the year 1879 a very handsome silver armlet and bracelet were dug up in the county Kerry. The bracelet is a plain heavy flattened penannular band of silver, the other, an extremely good example, is of twisted torque-like pattern, and may have been worn as an armilla or necklet. It tapers from the points, where it is brought together, secured with a silver loop,

Fig. 296.
Fragment of Cetaceous bone, with archaic pattern. (Full size.)

and swells out to full proportions in the centre. Mr. R. Westropp exhibited a twisted silver-torque at a Meeting of the R.H.A.A.I. It was found, in 1883, by a peasant when ploughing at Rathcormack, county Cork. It, together with five others of similar make, were underneath a stone. It is elaborately ornamented. Several silver rings, about the thickness of the little finger, were found, in 1840, in a rath in the county Kilkenny; in 1844, nine articles were discovered on the lands of Kilbarry; in 1848 another small hoard, six in number, was disinterred, in the process of quarrying, within a short distance of Lohart Castle, near Kanturk.

Fig. 297.
Pipe-clay Crucible, from a Lake-dwelling. (One-quarter real size.

Sir William Betham alleged that Etruscan silver money had been discovered in Ireland; the assertion, however, has never been authenticated, and it may be taken as almost conclusively proved that there was no coinage in ancient Erin; the earliest coins belong to the Danish kings of the various settlements which had been formed around the cities on the littoral.

Although, up to the present, there are few recorded instances of the discovery of the precious metals on the sites of lake-dwellings, yet they have been the most prolific source from which were obtained both small earthen crucibles, so diminutive as to have been useful only for gold or silver smelting, and also pipe-clay cupels for refining purposes, like those used in the present day for the assay of gold and silver.

Figure 297 is a pipe-clay crucible from Lagore, one inch in height and two inches broad.

Figure 298 is one formed of clay softly burned, hand-shaped, and of a dirty pale-yellow colour; the hole at

the handle end is bored through. Another well-baked crucible was found at Nobber. Fragments of these articles are common 'finds;' the numerous traces of cupels and crucibles bear witness to the work of the goldsmith in Ireland, as do the stone moulds to the former trade of the native bronze worker. Hoards of broken and fractured bronze implements bear witness to interrupted preparations for recasting, and collections of secreted gold ornaments, twisted and contorted, suggest a like purpose.

Fig. 298.—Crucible of baked clay, from a Lake-dwelling in the west of Ireland. (One-fifth real size.)

CHAPTER XII.

PERSONAL DECORATION: BONE, BRONZE, GLASS, AMBER, JET, AND STONE ORNAMENTS.

BOTH savage and so-called civilized man delight in adornment of the person. From a mental standpoint, is there much difference between an African negro strutting about in a tall hat which he possesses for the first time, and a modern Briton, in some much frequented promenade, showing off his clothing cut in the latest fashion? A poor savage imagines she adds to her beauty by having a hole pierced through her nose for a ring, and the nineteenth-century woman has the same done to her ears. In some respects we are evidently not much above Palæolithic ideas of the beautiful.

Bone pins are very abundant, and were apparently the personal ornament most in use amongst the ancient inhabitants of the land; the vast majority of these pins were evidently employed as dress-fasteners; a few are pierced as if used as needles, but those so pierced were possibly attached to the dress by a string, or they may have had a ring or other ornament passed through the aperture. The Irish name for this article is suggestive: *dealg* signifies a thorn, as well as a pin, and probably points to the primitive mode of fastening a covering for the body by means of particles of wood. So late as the first century Tacitus, writing of the Germans, states that

they wore 'a loose mantle, made fast with a clasp, or when that cannot be had, with a thorn.'

Bone pins vary in length from two to even nine inches; some of great size have been found in primitive interments (fig. 299). Some are formed of the smaller legbones of quadrupeds, and others of the bones of birds (fig. 300); many are perfectly plain, and others highly decorated. A few have an enlargement about half-way down the acus, or shaft, as if for the purpose of retaining the article in position (fig. 306). In later times the head was fastened on to the pin, the article being thus formed of two distinct pieces.

The hole in the head of the pin appears to have been for insertion

(*a*)

(*b*)

Fig. 299.

Fig. 300.

Fig. 299.—Upper portion (*a*), and pointed extremity (*b*), of semi-petrified bone Pin, from Carrowmore, Co. Sligo. (Full size.)

Fig. 300.—Fragment of bone Pin. (One-half real size.)

of bronze wire, or to permit of the pin being attached by any other means to the article of clothing in which

the acus was inserted. In excavations in England bone and bronze pins have been found with bronze wire still retained in the perforated head, and on the site of a lake-dwelling in the island of Achill one was discovered, but on being handled the wire crumbled into dust (fig. 301). In lake-dwellings pins form one of the most numerous class of articles found. Great variety is observable in their shape and design; indeed, there are few articles on which the primitive artificer has bestowed more pains than on these cloak- or dress-fasteners. Bronze pins, found on the sites of the lake-dwellings of Switzerland, are, with few exceptions, of one type; at Möringen the 400 pins recovered may be said to have varied only in size, whilst on the sites of Irish lake-dwellings these articles differ in design even more than in dimensions. In later examples, brooch-pins furnished with rings more or less broad, and often expanding at one part of the circlet into a crescent-like form, are of common occurrence. In more recent specimens, instead of a ring, there is a penannular loop, through which the acus may freely pass.

Fig. 301.—Golden-bronze Pin, with wire attachment. (Full size.)

Figure 302 represents a series of articles formed of bone. The pins are of simple form, and call for no remark (fig. 303). Figures 304–306 are good examples of a more advanced type, and in figures

307–310 the pin and the head are formed of separate pieces.

Two small fragments of worked bone were found, in conjunction with calcined human remains, in one of the

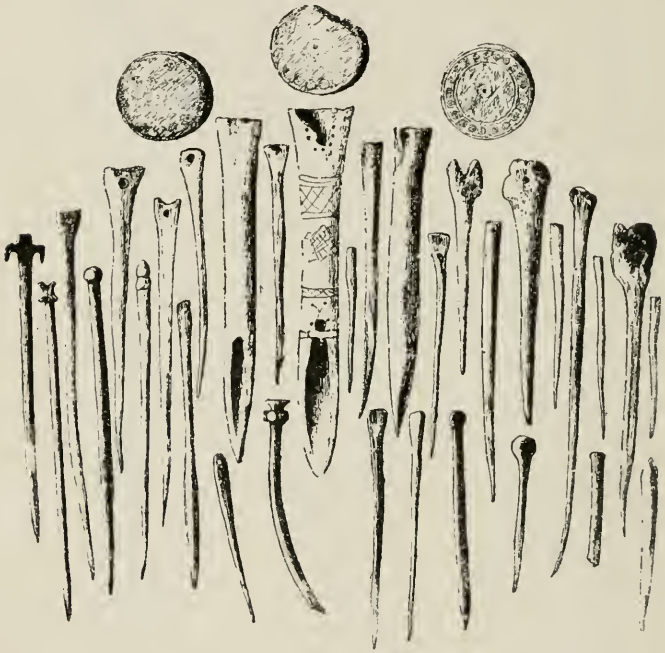


Fig. 302.—Bone Pins, Scoops, and Discs, from Lake-dwellings in the Counties Sligo, Leitrim, and Roscommon. (About one-third real size.)

rude stone monuments of the Carrowmore series, near the town of Sligo ; they (figs. 310 A, 310 B) were evidently the terminations of some object or objects, and they are similar in general character. It has been

suggested that they were portions of a musical instrument, but it seems more probable that they had been connected with some utilitarian purpose, such as dress-fasteners for the clothing of the dead.

Fig. 303.

Bone Pins from Lake-dwellings in the Counties Sligo, Leitrim, and Roscommon. (One-sixth real size.)

When we pass from bone to bronze pins, the process of development is displayed in an unmistakable manner, though, as a rule, it must be admitted that the bronze pins which are still extant are probably, as a whole, of greater antiquity than those formed of bone; bronze being able to resist the decay of centuries better than animal material. In one class all the decoration is confined to the pin itself, or in the development of the head, which is enlarged, formed into various shapes, and decorated in almost every conceivable pattern.

Fig. 304. Fig. 305. Fig. 306.

Bone Pins from the sites of Lake-dwellings.

Fig. 304. (Full size.)
Fig. 305. (One-sixth real size.)
Fig. 306. (One-half real size.)

The next stage is marked by a ring being affixed to the head of the acus, either by means of rivets, or the ring being inserted in a hole through the head. In some instances several separate rings are thus employed, and the ring is gradually

expanded and enlarged until it becomes the great object of the ornamentation; it then attains the dimensions of those magnificent specimens

Fig. 307.

Fig. 308.

Fig. 309.

Fig. 310.

Bone Pins with attached heads from the sites of Lake-dwellings. (Half real size.)

formed of white metal, which reach a degree of perfection rarely met with in other countries.

Figs. 310 A and 310 B.—Fragments of worked bone. (Full size.) Probably the heads of pins or the terminals of some ornament.

Enclosed in a sepulchral urn in one of the rude stone monuments of the Carrowmore series, situated

near the town of Sligo, was found a fine, but undecorated specimen of a brooch pin (fig. 310C), in an urn, together with a quantity of calcined bones. Pins of bronze thus found are supposed to have been used to fasten the skin or wrapper in which the bones of the cremated were enveloped, but it is quite as probable they were employed in fastening the wearing apparel, and were, as well as the corpse, subjected to the heat of the funeral pyre. Bronze being rare would only occasionally be found in, perhaps, some special object belonging to the departed, which had been deposited with the remains; indeed the presence of bronze in rude cists, in such rare instances, rather strengthens than weakens the belief as to the antiquity of cromleacs in contradistinction to carns.

Fig. 310c.
Bronze Pin, stated to have been found in a cinerary urn at Carrowmore, Co. Sligo. Full size.

Figure 310D represents a brooch pin of more modern times, apparently of the Christian period. It was found not far from the churchyard of Drumcliff, county Sligo, where there had been an early Christian settlement. The length of the pin is five and a-half inches, the diameter of the

ring two three-eighth inches, on which appear the settings for two stones.

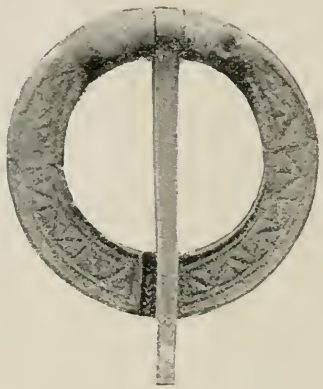
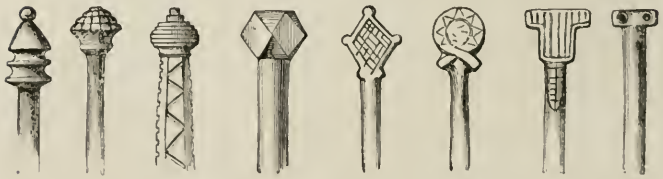


Fig. 310D.—Bronze Pin, found at Drumcliff. Christian Period. (Two-thirds real size.)

Lake-dwellings and street-cuttings are the principal localities from which the small pins (figs. 311–318) have been procured; they vary in length from two and a-half to seven and a-half inches. The majority of the pins in



Figs. 311–318.—Bronze Pins from the sites of Lake-dwellings and street-cuttings.

figure 319, when in use, must have been of a bright gold colour; all are well formed, some of them being elegant in design. Nos. 1, 2, 3, 4 have had a setting of stone; those still remaining are of transparent orange colour.

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Fig. 318A.—Represents a Bedouin Girl, near the ruined city of Oudina. [From a paper entitled *Rome in Africa*, by William Sharp.]

The above shows the similarity between modern African and ancient Irish brooches, as also the manner in which the latter were probably worn.

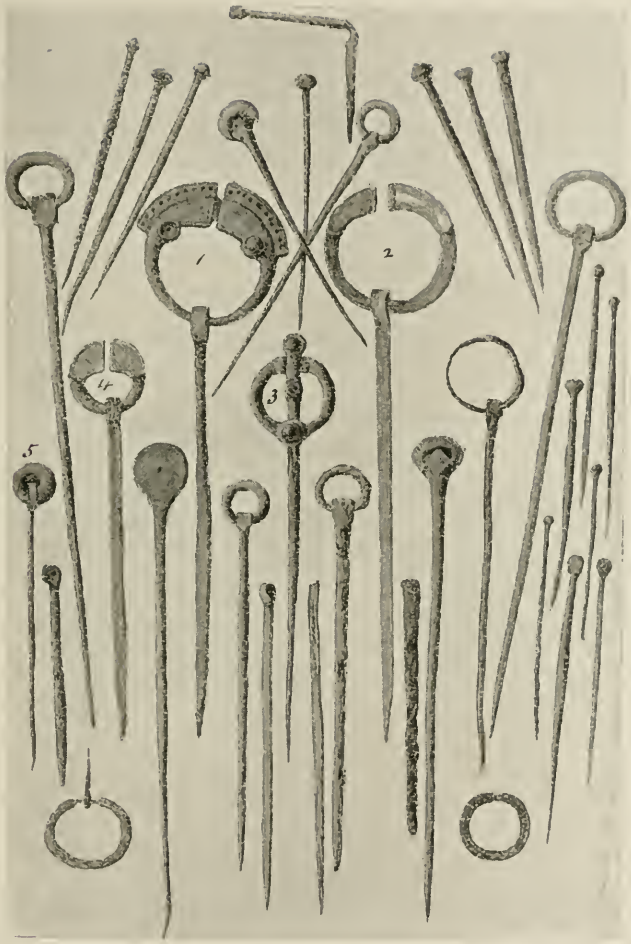


Fig. 319.—Golden-bronze Pins from the Lake-dwelling of Ardakillen. Late Bronze or early Christian Period. (One-third real size.)

Fig. 320.

Fig. 321.

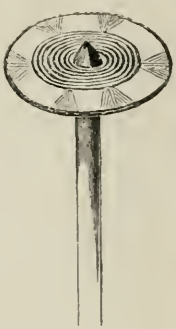


Fig. 322.

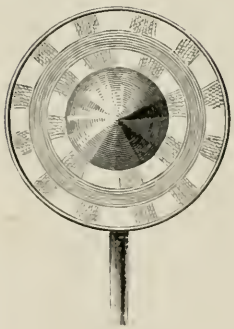


Fig. 323.

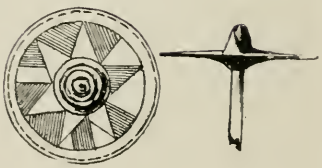


Fig. 324.

SHIELD, OR DISC-HEADED, BRONZE PINS.

Fig. 320.—Three-ringed Pin, from Lagore.

Fig. 321.—Eleven and three-quarter inches long. (One-half real size.)

Fig. 322.—Thirteen and a-half inches long. (One-third real size.)

Fig. 323.—Five and a-half inches long. (One-half real size.)

Fig. 324.—Bronze shield-headed Pin, from a Lake-dwelling at Auvernier, Switzerland. From Keller's *Lake-dwellings of Switzerland*. (One-third real size.)

No. 5, figure 319, forming the entire ring, is of a blue colour. The form and working of the heads of the smaller pins are very noticeable.

Figure 320, from the lake-dwelling of Lagore, is an almost unique specimen; its entire length is three inches; it has three rings passing through apertures in the elongated head; the part represented is decorated with a cross-like ornamentation.

A not unusual form of pin-head is the 'shield' or disc pattern, the plate varying in size from about half an inch to three inches. In some examples the head is plain, with a small central boss (fig. 321), and it resembles bone pins of the class figured in 307, 308. A more ornamented specimen is to be seen in figure 322, where the boss is enlarged and the decoration developed, until it reaches its acme in figure 323, in which the plate is parallel to the pin, not fixed at right angles to it. Similarly ornamented pins have been discovered on the sites of the lake-dwellings of Central Europe (fig. 324).

Penannular rings of bronze (fig. 325), of various sizes, sometimes highly decorated, are of frequent occurrence. They were formerly supposed by antiquaries to have been used as a species of money, but the more likely hypothesis is that they were worn as finger-rings, bracelets, and armlets, according to size, and resemble those met with in gold, the torque pattern being that most usually employed. Figure 326 is formed of two twisted rings, terminating, like some torques, in knobs, and joined to a circle.

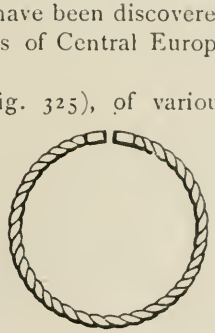


Fig. 325.
Penannular bronze Ring, from a Lake-dwelling. (Two-thirds real size.)

Figure 327 is formed of a double circlet of thin bronze, with free terminals, and, as it is decorated

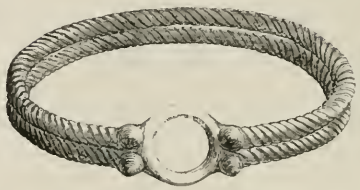


Fig. 326.—Double torque Ring. Late period. (One-half real size.)

with a 'bird-head' pattern, is probably of a comparatively late period.

Spring brooches have been seldom discovered in

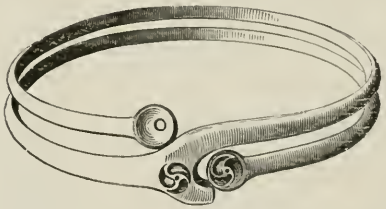


Fig. 327.—Double Ring with unattached terminals. Late period. (One-half real size.)

Ireland, though they are present on the sites of lake-dwellings on the Continent, and bear a close resemblance to classic fibulæ. The circumstances under which most of the specimens in the collection of the Royal

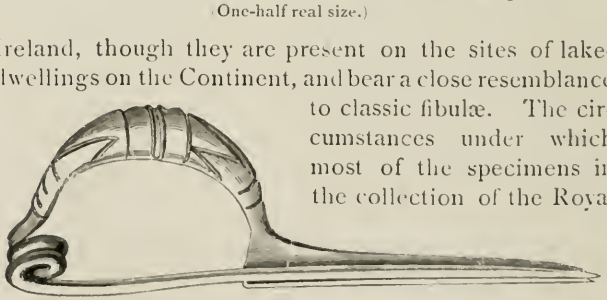


Fig. 328.—Spring-brooch of bronze. Late period. (Full size.)

Irish Academy were found are not recorded (fig. 328).

One, however, is stated to have been dug up at Navanrath, county Armagh.

The questions, when was glass first introduced into, or when first manufactured, in Ireland, are yet unsolved; but it is probable that one of the earliest uses of glass was for personal decoration. Though doubtless beads were first introduced from the Continent, or from Great Britain, as a means of barter, yet traces of continental influence are barely perceptible; the trade of making them probably spread quickly over the whole country, and gave origin to varieties of the introduced patterns. Beads are generally composed of impure glass, frequently opaque, of uniform colour, and either plain or decorated. Another class is formed of vitreous paste, holding a middle place between pottery and glass. Glass ornaments, from the most simple bead to the amulet studded with settings of enamel, of so much colour and beauty in outline that they might be worn at the present day, are still from time to time brought to light, principally in pre-Christian, as well as Christian, cemeteries and lake-dwellings, with which Ireland is so thickly studded.

There is one form of glass ornament which seemingly is found chiefly in Ireland. It is shaped somewhat like a dumb-bell, and is made of green vitrified porcelain or opaque glass. Glass beads are still regarded by the peasantry as possessing talismanic power.

In carns in the North of Ireland Petrie found 'opaque blue glass ornaments, exactly similar in colour and material to those of the Egyptians,' and an amorphous fragment of greenish glass, coated with a thick whitish crust was found *in situ* in a cromleac at Carrowmore (fig. 329). This vitreous mass had been probably an ornament on the body of the person, or one

of the persons, whose ashes reposed beneath. It had evidently been acted on by fire; the depression in its centre may have been occasioned by its contact (when in a state of fusion) with a small stone or pebble. It then for many centuries remained undisturbed until its present weathered crust, or the white matter, which is some description of silicate, formed on it. An iridescent or weathered appearance is, under peculiar circumstances, sometimes produced, in a comparatively short period, on glass. Most specimens of Roman manufacture found on the sites of ancient camps or villas in Great Britain, present this beautiful iridescent lustre, which is produced by a slow process of decay of the surface of the glass. The crust on the specimen from the Carrowmore cromleac is of similar character, but more weathered than the Roman examples, having passed the iridescent stage, and progressed to one in which a substantial coating of matter, impervious to the sight, has accumulated.

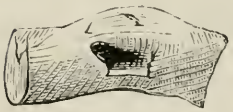


Fig. 329.
Amorphous fragment of glass.
(Full size.)

Similarity has been alleged to exist between ancient Egyptian and Irish beads, but the great difficulty in a comparison between these two classes lies in the long duration of time over which their manufacture in Egypt extended. Among the large numbers exhibited by Mr. Flinders Petrie in London, in 1885–6, there was, exclusive of stone, a collection of glass beads amounting to about five or six hundred, and of common green or blue porcelain beads of which there were several thousands. From careful examination of this extensive collection, it appeared that the Egyptian beads which most nearly resembled those found in Ireland, were

either such as are 'characteristic of Roman Imperial times, or such as had survived into Roman times.' Several specimens of the dumb-bell and of the melon-pattern were recognized ; none, however, had the knob-ornamentation, or the spiral-thread pattern. There are evidently varieties of ages among the classes of Irish beads, and distinct characteristics of design and ornamentation, which bear witness to divergent methods of manufacture. In our present state of knowledge it would be premature to pronounce a final opinion on the antiquity of Irish beads ; but cumulative evidence seems to denote, that the earliest date which can be assigned to them is the first century of the Christian Era. Modern forgeries are by no means uncommon :— 'Dealers try their hands at deceiving collectors in glass beads,' remarks W. J. Knowles ; 'I have known cases where common penny strings have been purchased, the beads put in the fire, then taken to collectors, and sold as old beads.'

Five typical examples of ornamented beads are given. Fig. 330 is a bead of opaque glass, light-green in colour. Fig. 331, a beautiful specimen, is composed of clear glass, with bright-yellow spirals of opaque enamel. Fig. 332, of cylindrical form, composed of blue, white, and yellow enamel, is decorated with a white band round each extremity, and with yellow spots on the centre. Fig. 333 greatly resembles beads found in Scotland and in the lake-dwellings of Switzerland ; and the same remark applies to fig. 334. Fig. 335, restored from existing remains, is a ring of blue-coloured glass, decorated with spots, and a cable pattern.

The art of enamelling is very ancient ; ornaments have been found which prove that, at the time of the Roman occupation, the principle of fixing transparent

vitreous matter over metal was well known in Gaul. This encrusted enamel was composed of glass, coloured with metallic oxides, and then fixed by heat. It is not known at what period enamel was first used in Ireland; some writers refer its invention to the Gauls on the authority of a passage from Philostratus, who lived about the commencement of the third century, to the effect that the 'barbarians' bordering on the ocean, knew how to spread colours on hot metal so as to become—on the cooling of the material—as hard as the substance over

Fig. 330.

Fig. 331.

Fig. 332.

Fig. 333.

Fig. 334.

Glass Beads from Lake-dwellings. (Full size.)

which those colours had been laid. The enamel on the bronze sheaths found at Lisnacroghera has been pronounced to be *niello*—the *nigellum* of ancient writers—a composition of silver, copper, and lead (fig. 336). From the style of ornamentation, the enamelling and the shape of the iron swords, one would be inclined to relegate the sheaths to about the fourth or fifth century at earliest. It is impossible to determine whether the

sheaths had been formed by casting, or were beaten into shape from a plain sheet of copper; a graver had evidently been used for production of the ornamentation, as the lines are sharply and deeply incised.

Fig. 335.
Glass Ring from a Lake-dwelling. (One-third real size.)

Amber was employed in the formation of ornaments such as beads, dress-fasteners, rings, bracelets, &c.; the beads vary greatly in size, from a diminutive bead to those nearly three inches in length.

An amber-bead, inscribed with an ogham, had been for many generations in the possession of a family named O'Connor, in county Clare. It was used as an amulet for the cure of sore eyes, and was also believed to insure safety to pregnant women in their hour of trial.

Fig. 336.
Upper portion of Bronze Sheath. Probably of Christian Period. One-fourth real size.

O'Flaherty, in his *Iar Connaught*, states that amber was found in more or less quantities on the coast of Galway, and if present there, was also probably found on other parts of the western littoral.

However, it should be stated that many archæologists are opposed to the idea of amber being found in Ireland. It is present in a series of deposits that are absent in Ireland excepting near Lough Neagh. Both amber and jet are found in quantities about the shores of the Baltic, and some are of opinion that ancient Irish objects of amber came from thence.

Jet appears to have been extensively employed in the manufacture of decorative objects, principally as necklace-beads and dress-fasteners; the latter are perforated obliquely at back; this idea can be traced to the shell-ornaments of an early period, found in tumuli. Large rings and bracelets of jet are by no means uncommon.

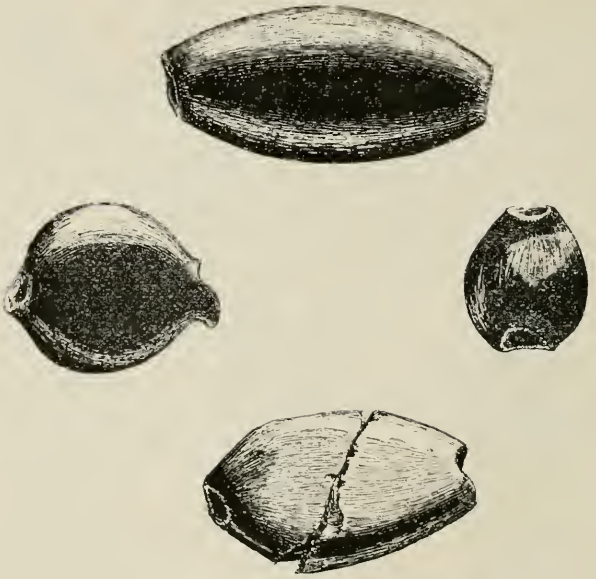


Fig. 337.—Jet Beads from the Co. Sligo. (Half real size.)

In the year 1260 Bartholomew Anglicus, an English Franciscan, wrote a work explanatory of many allusions to natural objects, &c., then current. He states that jet was found in Ireland; and Dr. V. Ball, C.B., remarks that jet may occur in other places in the kingdom, but it is certainly obtained from the Coal Measures

of Ballycastle, county Antrim. A sample of an early polished specimen from this locality is in the Dublin Museum, and ornaments had been formerly carved from this material. Lead appears to have been the metal

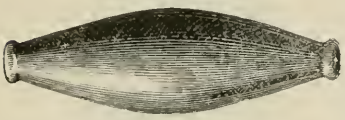


Fig. 338.
Jet Bead. (One-third real size.)

Fig. 339.
Jet Bead. (Half real size.)

chosen for setting specimens of jet, which tends to prove a late period for their fabrication.

The four large perforated beads in figure 337 were found at Aughamore, county Sligo; they are well shaped and have a high polish. Figure 338, another oblong bead, 5 inches in length and $1\frac{5}{8}$ inches in width, exhibits marks of long and continuous wear.

Articles such as figure 339 vary in shape, are square, circular, or oval, and averaging from 1 to $1\frac{1}{2}$ inches in

Fig. 340.—Front and back view of Dress-fastener of steatite. (Full size.)

their greatest length; they are polished upon the external surface, but unpolished and perforated by a semi-circular aperture upon the under surface, evidently for the purpose of being attached to the dress as a button. Figure 340 is of the same character, and was

found in a cist at Carrowmore, and is the most common form of button found in primitive interments, closely resembling figure 341, found upon Crawford Moor,

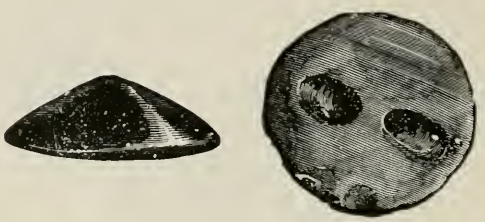


Fig. 341.—Side and back view of Dress-fastener of jet, from Lanarkshire. (Half real size.)

Lanarkshire. Figure 342 is described as a 'flat ring-bead, $1\frac{1}{4}$ inches wide, and having four leaden studs passing through it, either as an inlaid decoration, or to prevent it splitting.' Large rings of jet are common, and have been discovered in considerable numbers on the sites of lake-dwellings. Figure 343 is a bracelet from Lough Eyes.

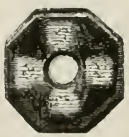


Fig. 342.
Jet Bead. (Half real size.)

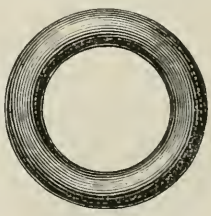
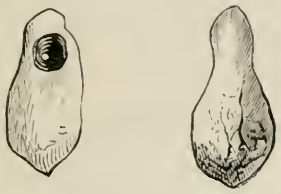


Fig. 343.
Jet Bracelet. (One-quarter real size.)

In one of the cists of the Carrowmore series of rude stone monuments a pendant was found formed of a natural quartz prism, clear as glass, and through the amorphous end of which a hole had been pierced for suspension. This is only the third specimen yet brought to light in Ireland, of a pierced pendant of crystal.

though many unpierced crystals have been found, which appear to have been used as charms (figs. 344, 345). The hole bored was, on both sides, considerably wider



Figs. 344, 345.—Front and side view of pierced quartz Crystal. (Full size.)

externally than in the centre, showing that it had been effected with very rude appliances.

Articles formed of stone for personal decoration or use are not uncommon; beads, rings, and buttons of stone are frequently found in primitive interments. The beads vary greatly in form and size, from half an inch to nearly three and a-half inches. A star-shaped ornament, which could have been used as a dress-fastener, pendant, bead, or button, and perforated on the under side so as to admit a string, was discovered in a pagan sepul-

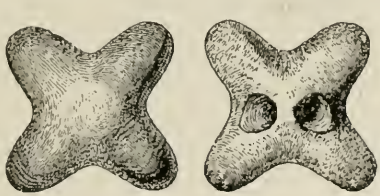


Fig. 346.—Star-shaped Button or Dress-fastener of stone. (Half real size.)

ture at the tumulus of Dowth, on the bank of the river Boyne (fig. 346), somewhat similar to the dress-fastener of stone, but conical in form, found in one of the Carrowmore monuments (fig. 340). On Ballyboly

mountain, county Antrim, about a dozen stone buttons, very similar to the foregoing, were brought to light. Rings formed of stone vary in diameter, from a size too small to have been worn as an ornament on the thumb or finger (fig. 346A), to such as were probably used as bracelets or armlets.

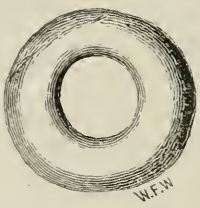


Fig. 346A—Ring formed of shale found in a cinerary urn, Dundrum, county Down. (Full size).

In Irish lacustrine sites, souterrains, and other localities, a number of discs, formed of deer's horn or bone, have been frequently discovered; and, as a rule, these articles are ornamented on one side only with the dot and circle pattern, such as appears upon combs and other articles of bone from lake-dwellings (figs. 347–349). These unperforated discs could not have been used as whorls. The idea has been suggested of their being used as counters for a game, and English antiquaries have pronounced a like opinion with regard to such articles discovered in their country.

In figure 302 there are three of these discs. Similar articles are found in considerable numbers in India, where they are said to have been used as votive offerings. Figure 350 is plainly decorated with five circles arranged in a cruciform pattern. Figure 351 has a border of circles with dots, surrounding four groups of four similar

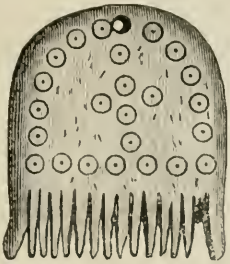


Fig. 347

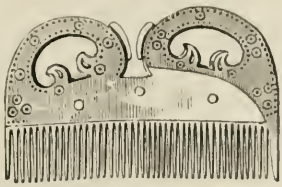


Fig. 348

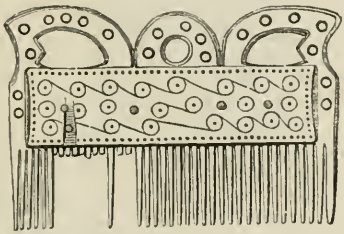


Fig. 349

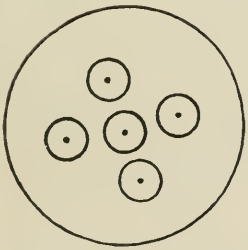


Fig. 350

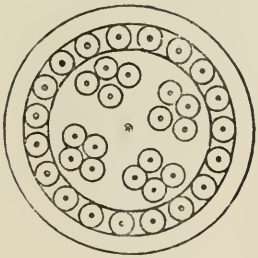


Fig. 351

Figs. 347, 348, 349.—Bone Combs from Lake-dwellings, with dot-and-circle pattern. (About two-thirds real size.)
Figs. 350, 351.—Unperforated bone Discs, from the Lake-dwelling of Cloonfinlough. (Full size.)

Fig. 352.

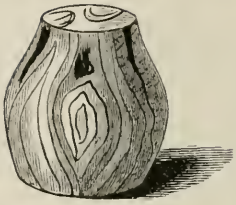


Fig. 353.

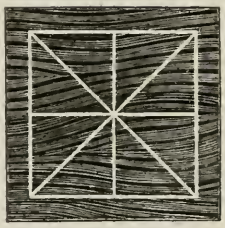


Fig. 354.

Fig. 355.

Fig. 356.

Fig. 352.—Unperforated bone Disc, from Drumcliff, Co. Sligo. (Half real size.)

Fig. 353.—Polished stone Counter, from the Lake-dwelling of Cloonfinlough. (Full size.)

Fig. 354.—Chalk-marked Board, used for playing a game with counters. (About one-twelfth real size.)

Fig. 355.—Stone Ring. (One-third real size.)

Fig. 356.—Stone Ring. (Half real size.)

circles. Figure 352 was found in a souterrain at Drumcliff, Co. Sligo, in company with calcined bones and traces of iron remains; the markings of the ends of the metal compass with which the designs were traced are quite perceptible. Figure 353 is believed to be a unique specimen of a stone counter, rounded in the body, diminishing towards the top, and flattened at both extremities; the surface is polished, and the material beautifully veined, yellow, pale brown, and white. In olden days there were several pastimes in which small stones, pebbles, and shells were employed, but, as art progressed, these were superseded by bone counters. So late as the commencement of the present century, a game then universal amongst the peasantry was played on lines usually marked on a board with chalk, as shown in figure 354. Each player provided himself with three counters, the one with small black pebbles, the other with those of a white colour, or with shells. These were singly deposited on the board in turn, the game being won by the player who could first get his three counters in a straight line. It may be fairly surmised that the unperforated discs, ornamented on one side only, served in games of this nature: the designs may have represented the different value of the pieces. The concentric circles and ornamentation on these discs bear a strong resemblance to sculptured and cup-marked stones; the discs in general show considerable merit in workmanship, and also evidence of long and considerable use.

Figure 355 represents a stone ring one-third real size; figure 356 another one-half real size; some rings are too small to encircle even the wrist of a child; it has been suggested that they were employed to fasten the hair.

Beads of stone are not uncommon; they are very frequently discovered with primitive interments.

Figure 357, found in a sepulchral cist at Carrowmore, county Sligo, is round in form; figure 358, smaller and more elongated in shape, is of the same material; and although primitive in appearance, the perforation is of

Fig. 357.

Fig. 358.

Fig. 359.

Beads formed of Steatite. (Full size.)

equal diameter throughout. In both the beads—at each extremity of the perforations—is plainly visible the groove formed as the result of constant friction by the thong, or cord, used for suspension of the beads. Figure 359 resembles figure 357, but is comparatively soft, yellowish brown in colour; whilst figures 357 and

Fig. 360.

Fig. 361.

Fig. 362.

Beads of Stone. (About one-fourth real size.)

358 have been subjected to intense heat, the material of figure 359 is in its original condition. These beads were formed of steatite, and although found in Sligo, it is stated that this material is not present in the district. The two whitish-coloured beads had undergone profound change, caused by intense heat and exposure—

the result of metamorphic action. Experiments with steatite under great heat demonstrated the fact that it became indurated, and that it closely resembled the material of which the two calcined beads were composed. Figure 360 is a plain globular stone bead; figure 361 is of whitish flint, originally polished; it has three apertures which meet in the centre; figure 362 is a small ring of clay slate; figure 363 is a stone bead depicted about half size.

Fig. 363.
Bead of stone. (Half real size.)

Owing probably to the perishable material of which they are composed, comparatively few beads of bone have been found; those represented in fig. 364 were discovered on the site of a lake-dwelling in the west of Ireland.

Fig. 364.—Beads of bone, found on the site of a Lake-dwelling. (One-half real size.)

CHAPTER XIII.

ORNAMENTATION: CUP MARKINGS—ROCK-SCULPTURING — DECORATION ON FICTILE WARE — RUDIMENTARY WRITING—ROCK SCRIBINGS.

GREAT interest is shown at the present day in the study of early designs on gold, bronze, stone, or other material. The patterns are very similar to the work of primitive man in most countries throughout the globe. The sculpturings on the massive stones which form the sides of many chambers in carns would seem to have been executed by aid of a pick or punch, though incised lines are frequently met with. The instrument used may possibly have been of bronze, sufficiently hardened. In connection with sepulchral chambers no flint implements have been found, at least nothing, in general, larger than a small knife, flakes, or arrow-heads. A pick of iron was discovered in a carn at Sliabh-na-calliaghe, and with it the greater portion of an iron compass adapted for tracing the curvilinear work on the sides of the passages and chambers; iron remains were also found in the New Grange group of carns. In the present state of antiquarian knowledge, it would appear as if gold working and adornment were firmly established before the era of the erection of the sculptured chambers of carns.

When archæologists find a race in possession of traditional figures and designs, now apparently meaningless, they, as a rule, imagine that when originally sculptured they had possessed a special significance, and that which may primarily have been produced by mere love of ornamentation probably develop in the eyes of their originators into sacred symbols; one example in Christianity, the cross, has both an historical and a religious significance, yet many pre-Christian nations possessed this emblem.

The style of ornamentation of which traces have been left by the pagan Irish on gold, bronze, stone, earthenware, &c., has survived to our day. It is thought that it will eventually be proved that this is:—

(1). Of such a nature as will establish the fact that the decoration was executed by one race, and one school of craftsmen; and

(2). That it is identical with continental pre-historic work.

This, for all purposes required by Irish archæology, is sufficient. To prove each link of the chain connecting the introduction of the first germs of culture into Ireland from its cradle in the East would necessitate a visit to every museum of antiquities in every country in Europe.

It eventuates that Irish pagan art was of an exotic style, which, though developed in a more or less characteristic manner, was not an original or national style, any more than the interlaced ornamentation which, introduced by the intrusion of Christianity from the Continent, was idealised and beautified, so that it is with difficulty many people can be persuaded that it is but an improvement on classic ideas of decoration. But this question of the origin of primitive ornamentation

has never been settled; it may, in fact, be said that it has hardly been opened. The few writers who have treated of it belonged to the eighteenth-century school of antiquaries, but now-a-days 'their words to scorn are scattered,' the records of their fanciful theories are allocated to the dustiest corner of antiquarian libraries; and when some investigator in search of side-lights on unwritten history comes across their lubrications, it is with difficulty he can be induced to wade through whole volumes for perhaps one solitary fact, their theories and in many instances their illustrations being equally unreliable. Ireland is the home of enigmas, and in no field of investigation are there a greater number than in the study of the origin of pre-historic designs. To their solution the Irish antiquary has brought every literary quality to bear, in addition to a credulity capable of believing anything; when he shall have finally discarded fanciful theories, and brought to light all that can be discovered of the story of the human past, a clearer idea may be obtained of the purport of the designs found sculptured in comparative profusion on the interiors of carns, and the faces of natural rocks.

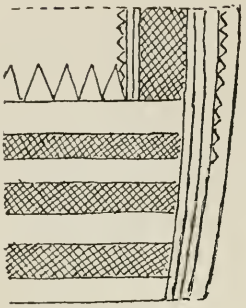
From whence the peculiar characteristics of style which gold ornaments present have been derived, has been for a lengthened period a subject of animated debate amongst antiquaries. Scan any considerable collection of Irish antiquities, and the observer will perceive that, where the ornamentation occurs, it presents a uniform and distinctive character; these primitive gold articles are adorned with circles, cups, dots, cross-hatchings, chevrons, bosses, rope-patterns, and fillets, such as are found upon the slabs of primitive sepulchres, the walls of caves, on rocks, on cinerary, as well as domestic fictilia—decorations which occur also upon bronze weapons of a prehistoric age. The ornamenta-

tion appears generally to have been executed by a series of punches; the indentations made by the instrument can in many instances be observed on the reverse side, which is unornamented; it must be admitted that the gold artificers of the mystic days of paganism were past masters of their art. Their craft and its secrets were (it is alleged) hereditary, and the recognised craftsmen of this early period were held in the highest honour.

Smithcraft, witchcraft, priestcraft alike attempt to constitute themselves a distinct and separate caste; they surround the most trivial matters with an air of mystery, and essay in every way to enhance the importance of their art. Charlatanism is the same whether practised in the beginning of man's existence on the earth, or in the nineteenth century; in the east, or in the west. In the olden days in Japan—and that is not so long ago—the forger of swords whilst he was finishing the blades worked alone in his workshop, and sang or chanted spells which it was imagined were, at the same time, wrought into the metal. In parts of Africa the smith is still looked upon as a sort of magician, and we need but turn to the pages of Kenilworth to see in what light he was regarded in England so late even as Elizabethan times.

In figure 365 No. 1 represents portion of the pattern on a large gold ornament in the Collection of the Royal Irish Academy; Nos. 2 and 3 a series of zigzags or triangles on each side of a double line (they are repeated on bronze axes); No. 4 is a very simple form, to be met with also on bronze objects; Nos. 5 and 6 are not quite so common.

Very early in the fabrication of bronze hatchets, hammered ornamentation appears, effected evidently with a sharp-edged implement. It generally consists of a



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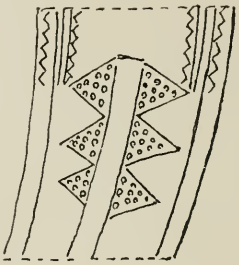

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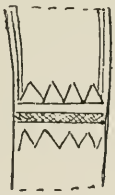

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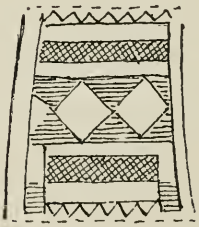

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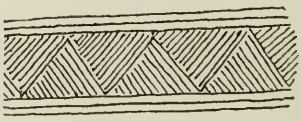

6

Fig. 365.—Examples of gold ornamentation. (Slightly less than actual size.)

number of oblique indentations, resembling a fern-leaf, or a herring-bone pattern. Sometimes the hammered decoration was included within lines made by a graver, but it was much less frequently used with bronze than with gold articles. Sometimes hammered decorations were effected with a small round, or an oval, or elliptical punch. Cast-ornamentation, both grooved and roped, is not uncommon. The illustrations from figs. 366–376

Fig. 366.

Fig. 367.

Fig. 368.

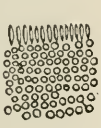

Fig. 369

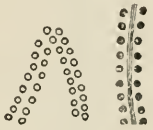

Fig. 370. Fig. 371.

Fig. 372.

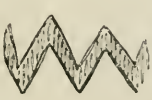

Fig. 373.

Fig. 374.

Fig. 375.

Fig. 376.

Figs. 366–376.—Examples of hammered, punched, engraved, and cast Ornamentation from bronze Axes. (Slightly less than actual size. Reproduced from the *Catalogue* of the Museum R. I. A.)

represent specimens of hammered, punched, engraved, and cast ornamentation on bronze axes in the Collection of the Royal Irish Academy. Figures 366, 367 show the herring-bone or fern-leaf pattern; figures 368, 369 the elliptical and circular forms of punched decoration, of which latter ornamentation figures 370, 371 present varieties. Figure 372 exhibits rows of triangular punched indentations, figure 373 the zigzag pattern, figures 374, 375, 376 the cast-ornamentation of the rope pattern.

The seven following illustrations have been lent by Sir John Evans, and are all from bronze axes found in Ireland. Figure 377 presents a roughly-worked double herring-bone pattern; and it is not impossible that the herring-bone or fern-leaf pattern suggested the origin of ogham characters. Figure 378 was found near Connor, county Antrim; the ornamentation, as in the previous

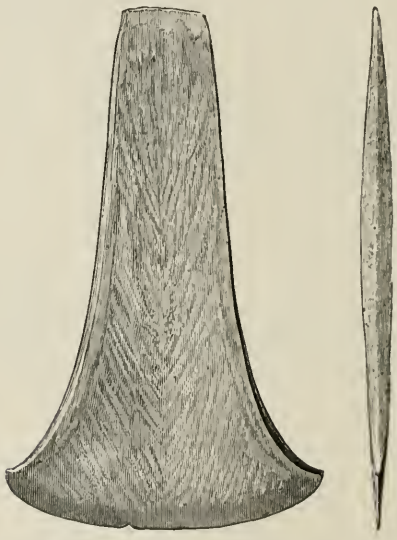

Fig. 377.—Bronze Axe, with double herring-bone pattern. (Half real size.)

example, is the same on each face, and consists of a double herring-bone or zigzag pattern. The sides of figure 379 are decorated with a cable pattern; the ornamentation present on the faces shows striking similarity to sculpturing noticeable on sepulchral slabs and on articles from Swiss lake-dwellings Figure 380, like many of its kind, is undecorated on the upper part, which had

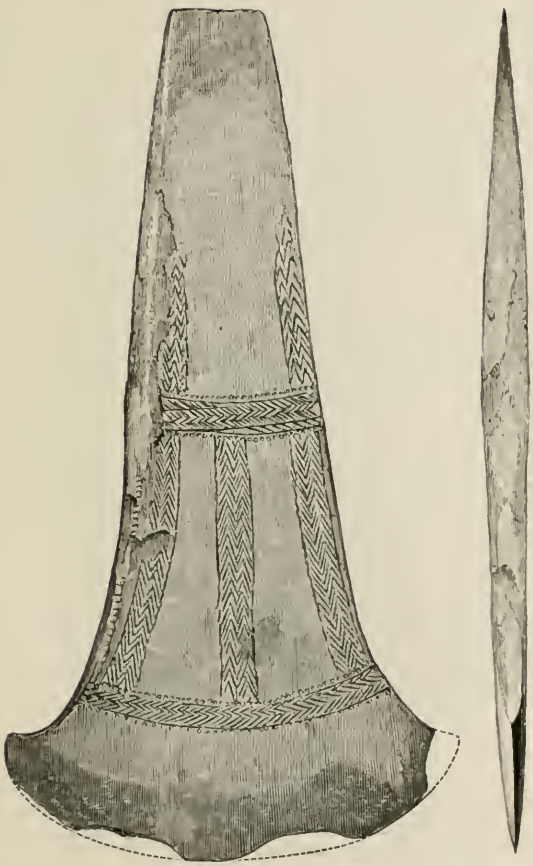

Fig. 378.—Bronze Axe, with double herring-bone pattern, contained within borders. (One-half real size.)

been originally covered by the hafting, but it is decorated on the lower part. It may be noticed that on the edges, even the cable pattern ceases at the transverse ridge. The lower part of the blade of figure 381 bears

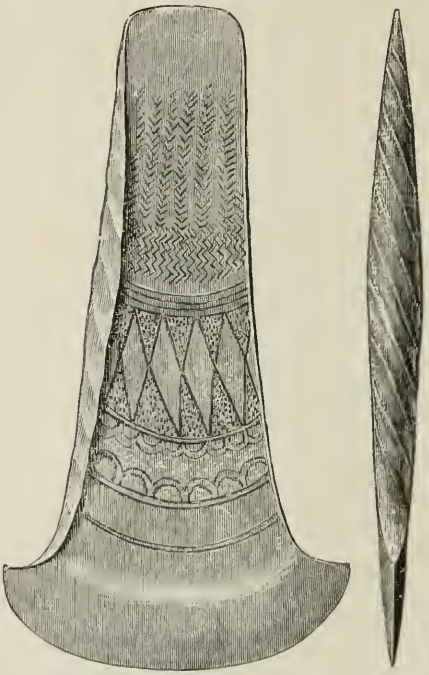

Fig. 379.—Bronze Axe, with ornamentation similar to that on sepulchral slabs and on articles from the Lake-dwellings of Central Europe. (Half real size.)

boldly-punched lines; two semi-lunar lines enclose a cross which divides the space into four triangles, two of them being ornamented. The sides bear cable patterns.

Figure 382 has straight and curved bands formed of chevron patterns. Figure 383 is highly decorated, each

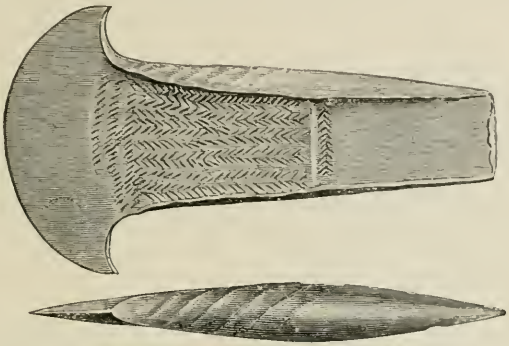

Fig. 380.—Bronze Axe, from Trim, undecorated on the upper part of blade (Half real size.)

of its faces in a different manner, and its style bears close analogy to many designs that may be seen in

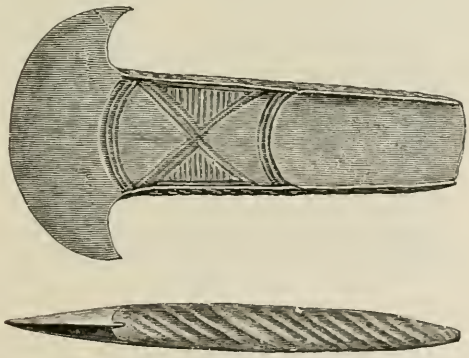

Fig. 381.—Bronze Axe, with cross-like ornamentation. (Half real size.)

Keller's *Lake-Dwellings of Switzerland*, and on the interior of Irish pre-historic sepulchral chambers.

Rock scribings until very recently remained unnoticed by antiquaries. A few early writers drew attention to the markings on the walls of the sepulchral

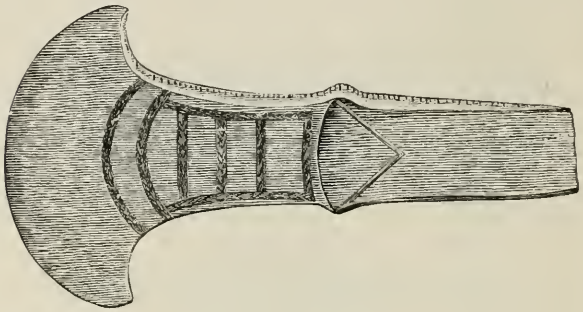

Fig. 382.—Bronze Axe, with straight and curved bands formed of chevron patterns. (Half real size.)

chambers of New Grange and a few other localities; but later and meritorious writers are silent on the subject of rock sculpturings, and some were probably ignorant of even their existence.

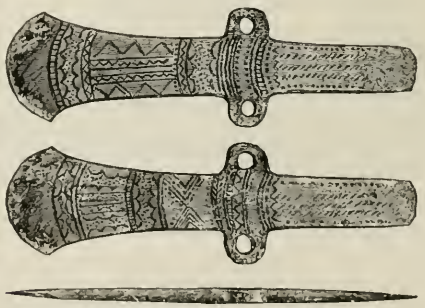

Fig. 383.—Bronze Axe, highly decorated, resembling those found in the Lake-dwellings of Switzerland. (Half real size.)

It is more than probable that very many plain 'cup-markings,' observable on slabs in cists, and on the

exterior and interior of rude stone monuments (figs. 384, 385) are not due to human agency. Similar markings occur on rocks, in fields and in localities, apparently quite unconnected with human handicraft. One flagstone with markings resembling these freaks of nature formed the flooring of a small cist in the Co. Sligo; another, cup-marked in similar fashion (fig. 386), was found by W. F. Wakeman near Enniskillen. W. Frazer, F.R.C.S.I., is of opinion 'that many, if not all, of the "cup-markings" found on Irish

Fig. 384.

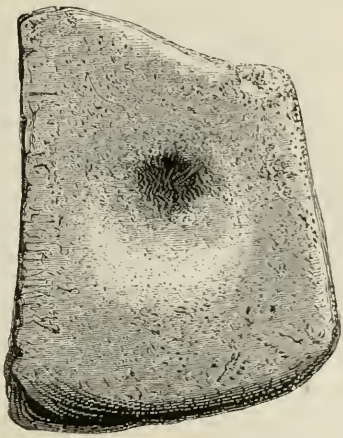

Fig. 385.

Figs. 384, 385.—Cup-marked Flagstones, from Drumakilty, Co. Fermanagh. (About one-eighth real size.)

megalithic monuments are not the work of man'; that is, simple cup-markings, not cup and ring markings, such as are represented by figures 387, 388, which are clearly due to man's industry, but 'depressions resembling cups, or segments of eggs, sometimes 2½ inches across, or perhaps more. It is extremely probable that the fabrication of these hollows is due to the *Echinus lividus*, or purple sea-urchin, which hollowed out the depressions

for residence when exposed to the ocean surf, many good examples of which may be observed on rocks along the western littoral.'

'The investigation of this subject raises an interesting point,' remarks R. Lloyd Praeger; 'one which has been frequently discussed, and can by no means be settled off-hand. In the *Irish Naturalist* for 1892 the cause of

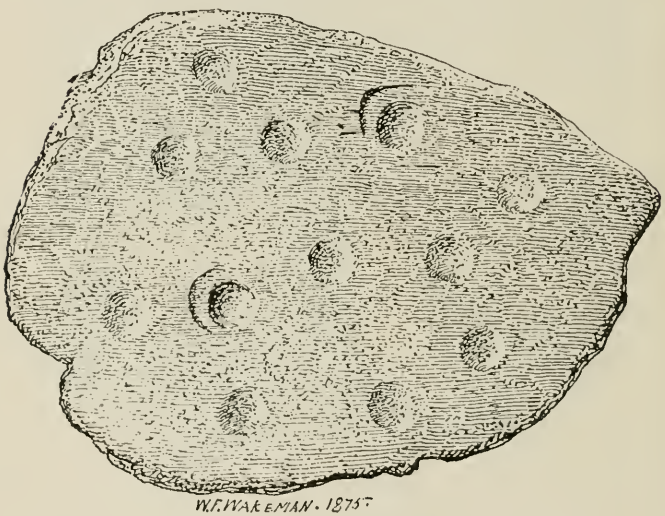

Fig. 386.—Cup-marked Flagstone, from Drumlion, near Enniskillen. (About two feet six inches long, by two feet broad.)

the cup-like indentations in limestone is gone into. Dr. Scharff disposes pretty conclusively of the suggestions that these were made by marine organisms, and points out the strong evidence of their having been made by snails, notably by the large *Helix aspersa*. These perforations, however, were in limestone, which

the acid secretions of the snail is capable of eroding. Some of the perforations before referred to are stated to be in sandstone, which the snail could not dissolve, and they are larger and shallower than the snail-holes. They are certainly, in size and shape, similar to those which the purple urchin makes, as may be seen at Bundoran and elsewhere; but as geological evidence is decidedly against any submergence of the west coast since a distant period, one may hesitate before throwing out the suggestion that the holes were made by this animal, unless, indeed, one has reason to believe that the blocks were transported by man from the present

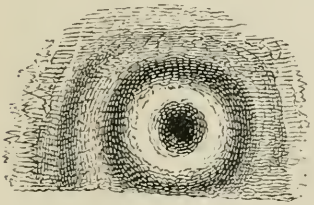

Fig. 387.

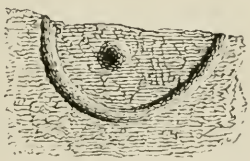

Fig. 388.

Figs. 387, 388.—'Dot and Circles' on fragments of Flagstones, townland of Tawnatruffaun, Co. Sligo. (About one-quarter real size.)

coast-line, in which case the Echinus theory appears a probable one. The subject should be handled with caution, some habitat of the purple urchin visited, its burrows carefully examined, measured, and compared with cup-marked stones, and this would probably throw light on the subject.'

Figure 389 has not come under the writer's personal observation, but, judging from the engraving, it would appear as if the primitive sculptor had either utilized or improved upon some of Nature's cup-markings; but this is merely a tentative suggestion. The inquiry is

left in this stage. Some scientific investigator may take up the task, the one opinion arrived at being that a great number of 'cup-markings' were not made by man.

Figures 389 and 390 are typical specimens of rock sculpturing observed on the faces of natural rocks in the county Donegal; this subject, however, has been exhaustively treated by G. H. Kinahan.

One of the most remarkable of the numerous rock-scorings hitherto discovered in Ireland occurs upon a

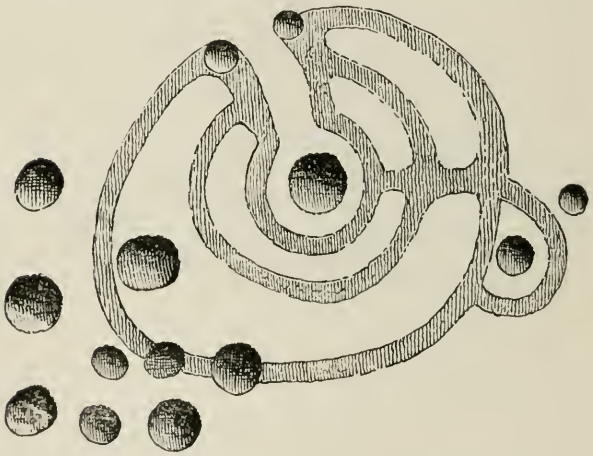

Fig. 389.—Rock-sculpturings, Co. Donegal. (About one-fourth real size.)

large stone, now preserved in the Belfast Museum. It stood formerly upon the shoulder of a hill situate near the little town of Broughshane, county Antrim. The stone, removed about the year 1888 from its original position by the farmer upon whose ground it stood, was subsequently purchased by the late Canon Grainger, at whose request the singular design which it bears was carefully rubbed, and drawn by W. F. Wakeman.

The scribing is incised, and has the appearance of having been worked out by the aid of a sharply pointed flint or metallic instrument, for lines similarly cut, are found upon stones forming portion of the sides of prehistoric sepulchral chambers. It would be very difficult to express, in words, the character of this rather elaborate design, but a perfect idea of its appearance can be gained by the accompanying drawing

Fig. 390.—Rock-sculpturings, Mevagh, Co. Donegal. (About one-tenth real size.)

(fig. 391), to which a scale is attached. The array of C-like figures resemble those on the Coilsfield stone figured by Fergusson (p. 267), in his *Rude Stone Monuments*. There can be little or no doubt that the Broughshane stone was monumental in character. The farmer by whom it was first lifted stated that it covered a grave hollowed in the earth, containing burnt bones, charcoal and ashes.

In the West of Ireland there are carvings, of a very

similar character to the Broughshane example, on the interior surface of the slabs forming a cist on the lands of Cloverhill, not far from the town of Sligo. The ground-plan of this monument is of somewhat oval form; the stones touch each other, and average about four feet in height. These had been originally covered

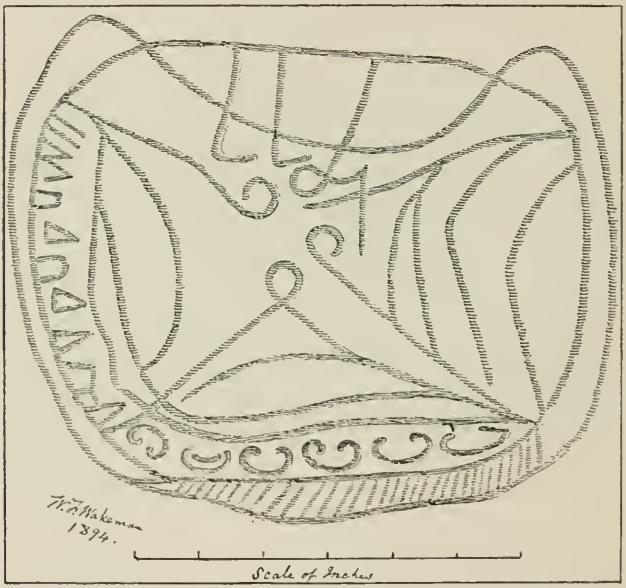

Fig. 391.—'Shield-pattern' Rock-sculpturing, from Broughshane, Co. Antrim.

by an immense flag, and the first intimation of the existence of the chamber was owing to the plough coming in contact with the slab which was covered with a mound of earth. The floor of the chamber was flagged, and it contained calcined bones and a cinerary urn, so there can be no doubt of the mortuary character of the

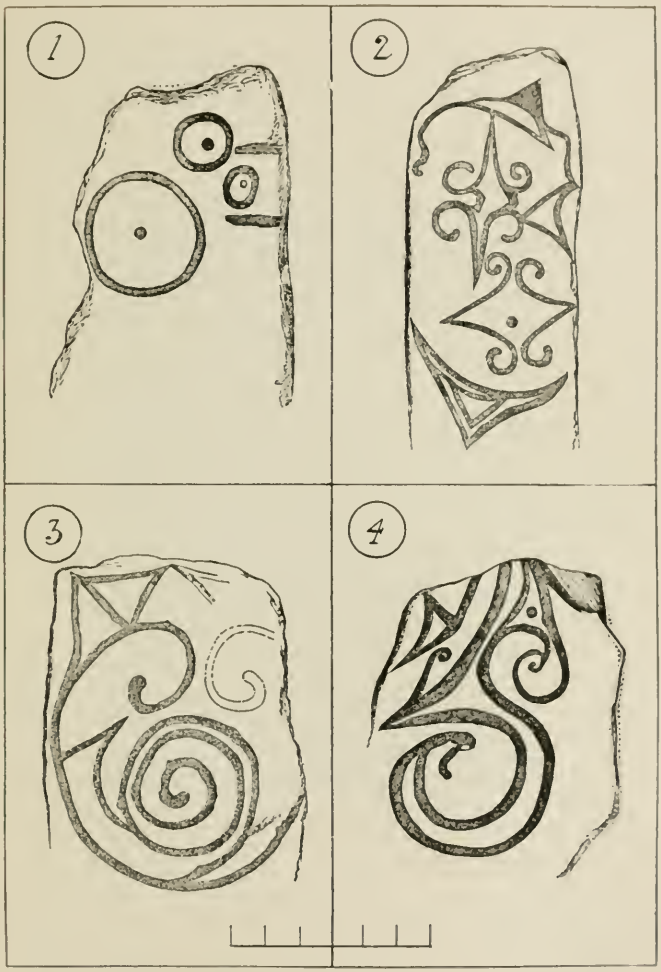

Fig. 392.—Rock-sculpturing, with 'shield-pattern,' from a prehistoric sepulchre at Cloverhill, near Sligo.

monument. Four of the stones which supported the covering slab were sculptured. Figure 392, No. 1, has two sets of scoring, one upon its edge, the other upon its interior surface; the marking on its edge consists of three small cup-like dots, each enclosed in a circle, also two horizontal lines, or oghamic-like scorings. No. 2 presents a V-shaped pattern, but attention is especially directed to Nos. 3 and 4. It will be at once perceived that when these stones first came from the hands of the primitive artists they were much larger; the portion of the stone on which the pattern was originally incised on the right side of No. 3, and on the top of No. 4, have been broken off, as the designs are evidently incomplete; this is the more noticeable, as the curious and elaborate ornamentation on the Broughshane example is complete in every respect; it will also be remarked that No. 3 was originally enclosed, like its Northern prototype, in a shield-like border. This design might therefore be styled the 'shield-pattern.' Its meaning or original symbolism may, perhaps, be ultimately unravelled by means of careful research, or the discovery of many similar primitive scribings. It is at any rate clear that the people who erected the Cloverhill tomb utilised older sepulchral slabs which they found ready at hand.

The four following illustrations are from sculpturings in the carns on the Loughcrew Hills. Figure 393 is a slab 1 ft. 4 in. broad, and 2 ft. 8 in. high; the scribings are punched, and consist of lozenge, zizgag, undulating and spiral patterns. Figure 394 forms the eastern side of a sepulchral chamber, and in front of it lay an oval dish-like urn, or receptacle for calcined remains. The slab is covered at the top by some nondescript scorings, but attention is especially directed to the three circles

directly over the urn. Can they have any reference to a triune deity? It will be observed that the circle to the right is double. Figure 395 is 4 feet 5 inches in height, and 3 feet 4 inches across in its widest part, it bears circles, circles with dots, a representation of

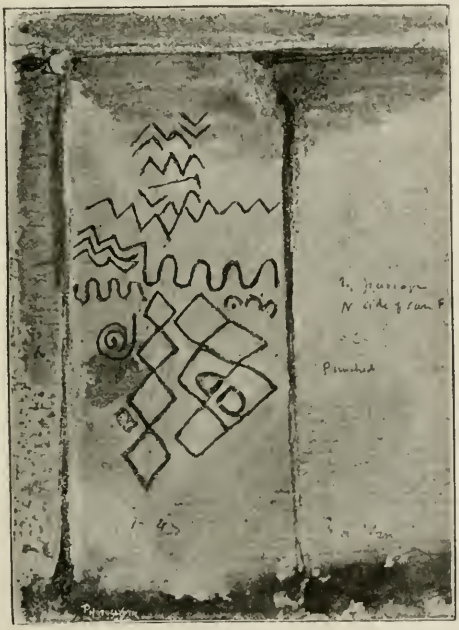

Fig. 393.—Stone *b*, north side of passage in Carn F, Loughcrew. (One foot four inches broad, two feet eight inches high. Punched sculpturing.)

a 'shield' pin, ogham-like scores, ornamentation approximating to that observed on pottery from Swiss lake-dwellings, a figure somewhat resembling a Catharine-wheel, nondescript scorings, and an object which

may be designated a 'centipede' design. Figure 396 is the roof-stone of a recess in a sepulchral chamber; its numerous scribings present features of great interest. The flower-like ornament is very remarkable; the series of imperfect circles to the left resemble those on Swiss

Fig. 394.—Stone *m*, eastern boundary of chamber, Carn L, Loughcrew. (Four feet ten inches broad, three feet one inch high.)

pre-historic fictilia. It may be suggested that the scribings on the roofing slab are possibly symbolic of some stated period of time. It will be noticed that the rays from the dots, forming, so to speak, stars, increase

Fig. 395.—Stone *k*, at east end of north recess Carn T, Loughcrew.
(Four feet five inches high, three feet four inches wide.)

Fig. 396.

Stone *oo*, Roof-stone of recess at western end, Carn I, Loughcrew.

in number from the top to the bottom, those lowest being enclosed in a circle. The four straight lines in square borders, may symbolise the four seasons; if so, the complex ornament at the bottom of the slab is representative of some combination of years. This idea is here advanced with the purpose of arousing discussion, and thorough examination of primitive sculpturings in general, and those in the Loughcrew carns in particular, thus orginating careful analysis of archaic scorings, and the suggestion of various theories from which, at length, some one of them may stand the test of criticism.

Although G. V. Du Noyer's name does not appear upon the drawings representing the incised sculpturing on the stones of the Loughcrew series of carns, yet the figures and memoranda are all in his handwriting; his drawings are considered most reliable. We owe to the Society of Antiquaries of Scotland the reproduction of an almost perfect set of the sculptured slabs of these wonderful primitive scribings.

It is now unfortunately impossible to collate these drawings with the originals, in the expectation of proving, or disproving, their accuracy. The process of decay in the outer laminæ of the scribed slabs was very observable, even in the first explorer's time. On the stones, which had been long exposed to the destructive effects of the atmosphere, the punched work was often much obliterated, but on those but recently exposed the mark of the tool was almost as fresh and distinct as at the period of its execution. It is greatly to be desired that the sculptured portions of all subaerial prehistoric tombs, or cists, should be removed to a museum, as lengthened exposure to climatic influences has already played sad havoc with the designs.

A mere enumeration or description of the various kinds of sculpturing on the walls of sepulchral chambers, or on the natural face of rocks, would be of little assistance in elucidating the subject of ornamentation could we not find a connecting link between it and that left by the primitive Christian population. Close to the village of Derrygonnelly, Co. Fermanagh, there are caves, upon the walls of which appear undoubted

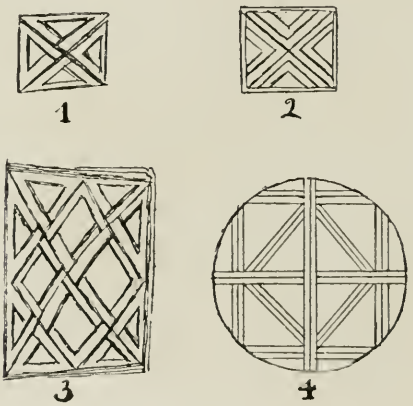

Fig. 397.—'Basket-work' pattern, Rock-sculpturings, Co. Fermanagh, and designs on pottery from Laibach Moor, Austria.

archaic scorings ; others resembling designs to be seen on pottery from the lake-dwellings of Central Europe, mixed with interlaced ornamentative Christian symbols and early lettering, amongst which appear the names and initials of 19th-century individuals, who probably hoped in this way to rescue their names from obscurity.

Nearly four miles from these caves, within the face of a cliff overlooking the small lake of Loughnacloyduff,

there are several recesses, two of which present appearances of being in part artificial, and which, judging by the traces left on the walls, were inhabited in pre-Christian as well as in Christian times. The largest measures about six feet in height, the same in breadth, and about ten feet in depth; here and there on the walls some care appears to have been taken to smooth the surface for reception of the sculpturing, which consists of star-like designs, ogham-like scorings, and intersecting straight lines enclosed within

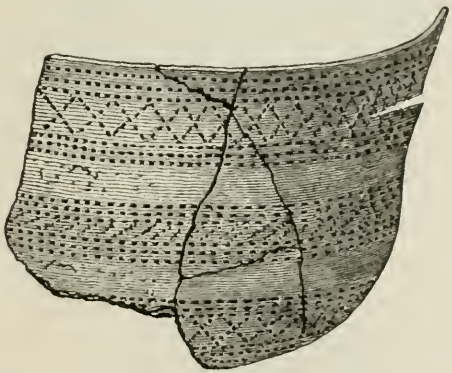

Fig. 398.—Fragment of Pottery, Moytirra, Co. Sligo. (Half real size.)

lozenge or quadrangular borders. A careful study of cave sculpturing may result in complete illustration of the connecting period in the history of Pagan and early Christian ornamentation.

Nos. 1 and 3 in fig. 397 are what may be designated basket-work pattern, sculptured on the sides of a cave in Knockmore, Co. Fermanagh. Nos. 2 and 4 present very similar ornamentation from pottery found on the site of a lake-dwelling at Laibach-Moor, Upper Austria.

Irish pottery of the sepulchral class is decorated in a style repeated on the wall of the mortuary chamber of cists. Figures 398, 399, 400 show specimens of the

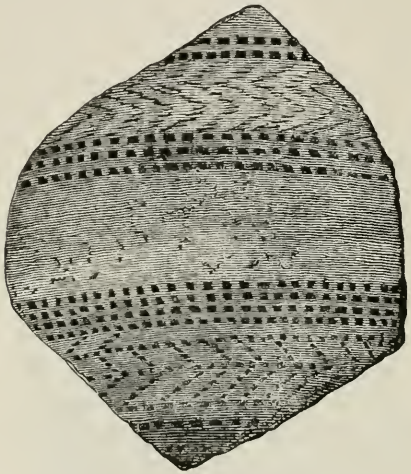

Fig. 399.

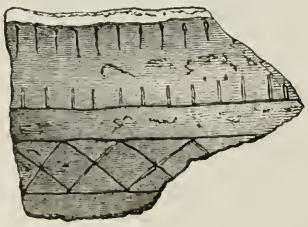

Fig. 400.

Figs. 399 and 400.—Fragments of Pottery, Moytirra, Co. Sligo. (Full size.)

lozenge and herring-bone type, and that of most usual occurrence. Figure 400A shows portion of a cinerary urn from a sepulchral cist near Sligo. It has been

subjected to intense heat on its interior surface. It is red in colour, thin, hard, well baked, and ornamented in a style observable on sculptured stones in carns. A study of the illustrations in Chapter VIII. will give a better idea of the usual decoration on fictile ware than pages of elaborate description.

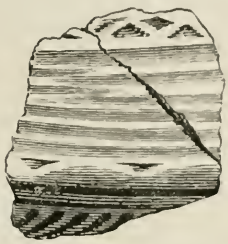

Fig. 400A.
Fragment of fictile ware.
(Full size.)

Figure 401 represents five varieties of ornamentation from the interior of carns, for purposes of comparison with decoration noticeable on fictilia discovered in lake-dwellings and seaside settlements: 1 is a lozenge moulding from New Grange; 2 is a fragment of pottery from Lough Eyes, county Fermanagh; 3, also from New Grange, exhibits a chevron, or zigzag design; 4, almost identical with the latter, is a piece of earthenware from Whitepark Bay, county Antrim; 5, an advanced architectural design from New Grange; 6 is a fragment of fictile ware from Lankhill, in the county Fermanagh; 7 is a herring-bone or fern-leaf pattern from New Grange; 8 exhibits the same design on a vessel from Lough Eyes; 9, a cross from Sliabh-na-Calliaghe; 10, crosses on fictile ware from Lankhill.

Figure 402 is a plate of designs from Irish rock sculptures, taken for purposes of comparison, with those from Scotland and the Continent: 1 occurs upon the stones of the Dowth carn; it would be impossible, with our present knowledge, to conjecture its meaning, although it probably was intended, not as mere ornament, but as a symbol of some kind. In 2 we find

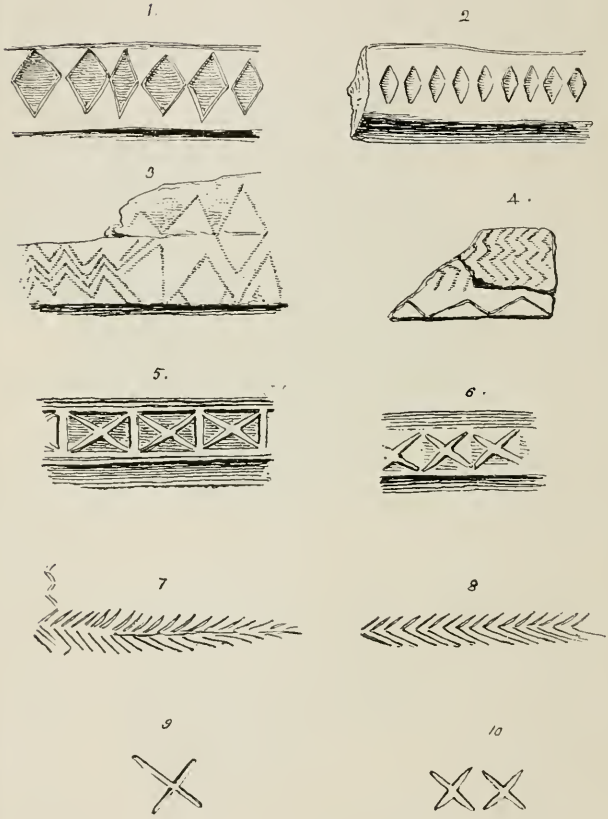

Fig. 401.—Specimens of Ornamentation from the interior of Carns, for comparison with decoration on the Fictilia of Lake-dwellings, &c.

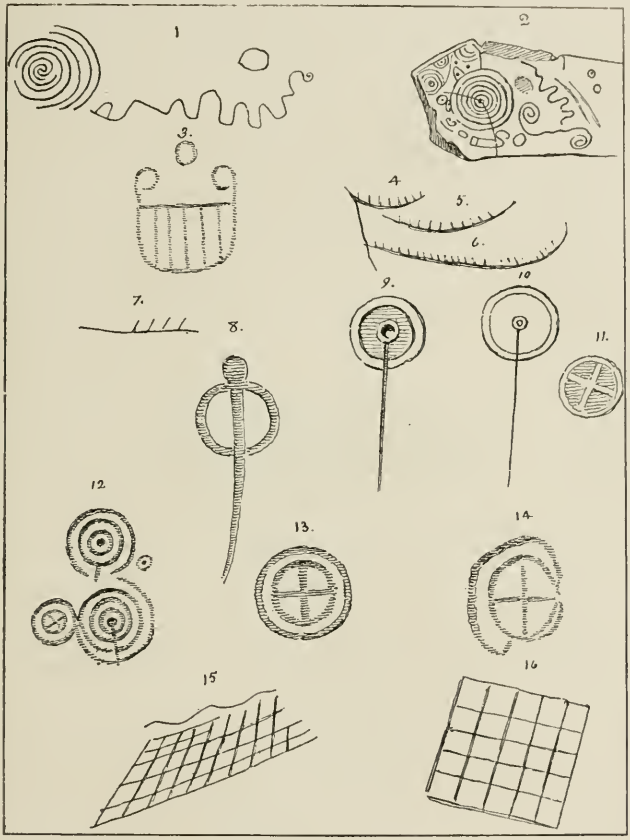

Fig. 402.—Designs from Irish Rock-sculpturings, for comparison with those from Scotland and the Continent.

a very similar design; it is not, however, an Irish example, but was found at Coilsfield, in Scotland. 3 may have been intended to represent a ship; a very similar shaped figure is sculptured on the Cross of Kells, county Meath and there does duty for Noah's ark. 3 is from Sliabh-na-Calliaghe. 4, 5, and 6 represent what appear to have been ships, such as the Vikings were in the habit of sculpturing, and which occur in great numbers, according to Fergusson, on the west coast of Gottenberg. 7 is one of the nearest approaches to the supposed representation of Norse galleys hitherto noticed in Ireland; it is carved on the wall of a natural cavern at Knockmore, Co. Fermanagh. Some remarkable scorings appear upon a huge boulder situate not far from Clonmacnois, King's County. They seem to have been intended for brooch-pins, such as were in use from a very early period in Erin. These carvings, so far as now known, are unique in Ireland. 8 represents a typical specimen. Something very like it may be seen on the side-stone of the Aspatrid cist figured by Fergusson (p. 157), in his *Rude Stone Monuments*. The drawings are confessedly copied from very rude originals. It is extremely difficult to determine whether the sculpturings were intended to represent bronze brooch-pins, of the so-called 'shield' class, or cup-and-circle patterns, with very elongated channels (9 and 10). A number of crosses of the pattern of 11 were in company with 9 and 10; they compare interestingly with 12, 13, and 14, all of which are from Ireland; the two first are on the face of the natural rock at Mevagh, or Barnes, county Donegal. 14 is from the interior of the great sepulchral chamber of Dowth, county Meath. 15 and 16 are straight line figurings, the former from stone S, carn U, of Dr. W. Frazer's

account of the Sliabh-na-Calliaghe carvings. 16, cut on the side-stone of the Aspatrid cist, has been engraved by Fergusson. Figure 403 represents a bronze axe; the upper part of each face bears a very similar chequered pattern.

When a more than usually intelligent savage of olden days first scratched upon bone, or the natural surface of rock, a rude delineation of some object which had specially attracted his notice, the weapons which he used, the ornaments he wore, or, in fact, any strange device; ignorant although the primitive sculptor was of the fact, yet the first step towards writing had been

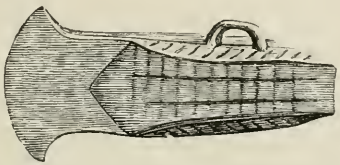

Fig. 403.—Bronze Axe, with chequered pattern. Collection R. I. A. (Half real size.)

made by him, for pictorial drawing is undoubtedly the earliest method of conveying, without the vehicle of speech, our ideas to others. This primitive system is still adhered to, and with great efficacy, in rudimentary lesson-books for juvenile beginners.

Many people are quite willing to admit this origin of writing, and will concede that from the commencement of man's existence on the earth there never has been what can be defined as an entirely new religion, but when arguments are driven home on these lines, the theories are generally abandoned, when they catch sight of the goal at which they would be landed.

Whether figure 404 was intended by its sculptor as writing, or as mere ornamentation, is, for the present purpose of investigation, comparatively unimportant; but it is clear that, for whatever purpose it was cut, that

Fig. 404.—Rock-sculpturing, from New Grange.

at Mané Lud, in France, also was incised (fig. 405); they bear a strong family likeness, a likeness which may be said to extend to the design represented by No. 2, fig. 392, on the sepulchral cist at Cloverhill, Co. Sligo, and fig. 406, a carving, also from Mané Lud.

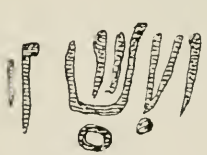

Fig. 405.

Fig. 406.

Figs. 405 and 406.—Rock-sculpturings, from Mané Lud, France

Great similarity is observable between the sculpturings represented in figs. 407 and 408. The former occurs on the side of a cave at Loughnacloyduff, county Fermanagh, the latter on a cromleac at Lennan, county Monaghan. We have the dictum of O'Donovan in the year 1834 that the latter was a forgery, which he denounces in very unmeasured language, at the same time alleging no reason for his belief.

The late Rev. James Graves also entertained doubts of its genuineness, but he thought it should be brought under the notice of antiquaries in order that if spurious,

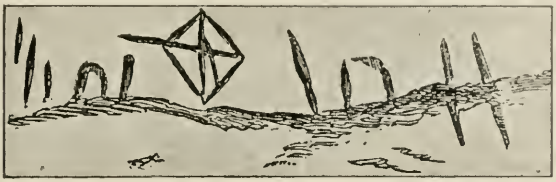

Fig. 407.—Sculpturing on the wall of a cave, Co. Fermanagh. (About one-third real size. After a drawing by W. F. Wakeman.)

competent authority should pronounce a verdict on it. Certainly it appears highly improbable that a modern

Fig. 408.—Cast of an alleged inscription on a cromleac at Lennan, Co. Monaghan.

forger or 'Flint Jack'* would, without hope of remuneration, occupy his time in carving designs on the

* 'Flint Jack,' the well known worked-flint forger, conceived the idea of visiting Ireland, thinking that his English beats required a 'rest.' He, accordingly, started heaviiy laden with antiquities for 'the sons of Erin.' He says he did well; but the 'sons of Erin' were not his only victims, for on being asked if he had sold flints and other antiquities to the officials of the British Museum, Jack indignantly replied, 'Why, of course I did; they have lots of my things, and good things they are, too!'

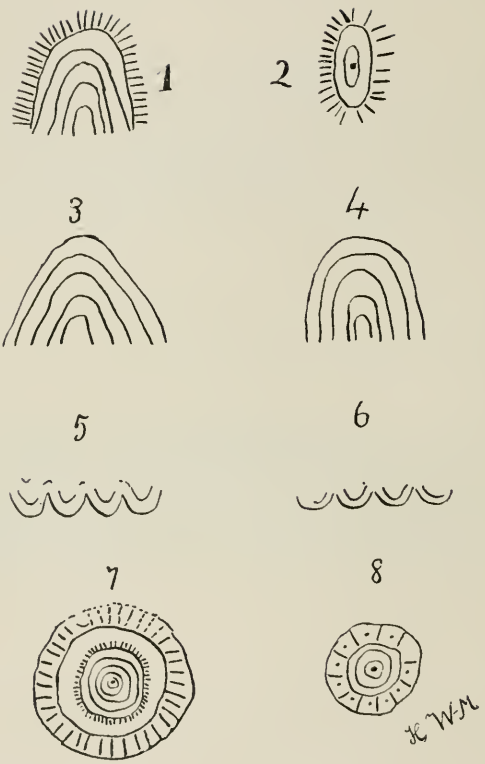

Fig. 409.—Specimens of Ornamentation on Pottery, from the Lake-dwellings of Central Europe, for comparison with Irish Rock-sculpturing.

sides of a cave in the county Fermanagh, and on a sepulchral monument in the county Monaghan. Probabilities appear to be in favour of the genuineness of both sculpturings; the approximate date of their execution is difficult to solve, but they present a very ogham-like appearance.

Going still further afield, to Central Europe, it will be seen that the Swiss lake-dweller and the Irish mortuary sculptor might be said to have been taught decoration in the same school. In figure 409, 1 is a pattern on a fragment of pottery from Wangen, in Switzerland; 2 is on a stone at Sliabh-na-Calliaghe; 3 on fictilia from Lago di Varese, Northern Italy, and 4 is repeated on several slabs in the chambers of the Loughcrew carns; 5 a decoration on pottery from Wangen; 6 on Irish bronze axes and sepulchral monuments; 7 appears on pottery from the Mond See; 8 on a slab in a carn at Loughcrew. It will be observed that the foregoing are the germs from which sprang the ornamentation on figure 410.

It is thought that sufficient evidence has been now advanced to demonstrate—or at least to prove a *primâ facie* case—that on the Continent, and in Ireland, archaic ornamentation was executed by the same race, or by the same school of craftsmen.

In the foregoing descriptions simplicity of language has been aimed at, for technical archæological expressions are used by many writers without much regard to precision; and when uncertain or ill-defined words are employed with frequency, it is hardly to be wondered at that misconceptions arise in the mind of the reader. Is it not better to write in conformity with truth than to continue to indulge in illusions, and, instead of yielding to a fervid imagination, to make

merely a statement of facts, and the deductions to be drawn from them, thus demonstrating in a practical manner the state of civilization of the people who occupied Erin long before the beginning of authentic history.

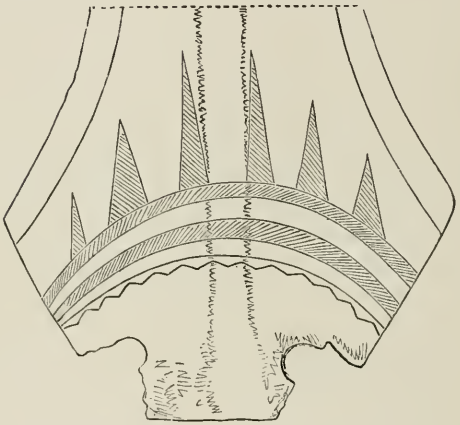

Fig. 410.—Ornamentation on a bronze dagger blade Collection, R. I. A.

(Full size.)

CHAPTER XIV.

CONCLUSION.

ERTAINING to the great drama of human existence in Ireland, which has now been passed in review, no complete and connected outline has, up to the present, been laid before the public. Gradually on the horizon of human understanding breaks the light of science like the light of day, at whose first appearing nothing is visible but objects close at hand; then, in succession, those more distant come into view. The time seems opportune to try to open up a vista into the past, and, if an uninterrupted view be obtained, it will probably change many preconceived ideas as to the state of society in long past ages. Geology and archæology, so far as they furnish evidence of the gradual ascent of man in the social scale, in Ireland and elsewhere, prove to be kindred sciences, dovetailing into one another with no hard and fast line of separation; and as knowledge of the subject increases, we may expect the boundaries to become more difficult to define. Each can, to some extent, explore what up to the present has been regarded as the domain of the other, when, instead of incongruities, harmonies will appear. Previous researches should be looked on as homogeneous and what has been now discovered belongs to archæology at large, one subject acts and reacts upon another,

along the line of contact, so that they all must be looked on as one great whole. There have been many good archæologists, and plenty of specialists, but there has been, so far, no attempt at generalization. Writers speculated in a fantastic manner on the past; many, who claim extreme accuracy, carefully omit all reference to authorities and facts which would disprove their theories, and frequently ignore things which tend to disturb the conclusions to which they have arrived; but now we, to a great extent, really know and can see how, from a very primitive beginning, civilization progressed in the most simple and natural manner, for it is a law of all science that 'to know a thing thoroughly we must know it in its genesis and in its growth.'

However humiliating to human pride, it must be admitted that in the earliest period of his existence, man was scarcely distinguishable from the brute creation. His efforts tended chiefly to a single aim, the obtaining of his daily food; the requirements of the larder were uppermost in his thoughts; and from the evidences produced (Chapter IV.), it is almost impossible not to accuse of habitual cannibalism large portions of the aboriginal population. The subject is interesting in itself, and much light may be still thrown on it by careful analysis of obscure customs still extant in Ireland, as well as amongst present-day barbarous or semi-barbarous peoples. We have seen how a sexton in a graveyard in the West of Ireland had recently, when digging a grave, to secrete the adipocere he turned up, as otherwise it would have been carried off, melted, and administered to invalids as a certain cure for consumption. Strange ideas concerning human or animal fat were current in days both ancient and modern. In sacrifices by fire, amongst Jews and

heathen alike, the fat of the victims was specially reserved as the food of the gods; its use was therefore forbidden to the commonalty, by whom it was considered holy, and if a thing is regarded as holy or tabooed, it possesses, for that very reason, certain characteristic qualities. Amongst many savage races the fat of some animals is supposed to possess healing virtues, and, dissolved in water, is often administered for cures. Dried flesh and fat are used by several African tribes as charms, and to effect cures; grease is the common unguent employed all over Africa, its use is not merely considered hygienic, but has a sacred meaning. The use of various kinds of fat, but particularly of human fat, as a charm is common all the world over, and this is because fat, like blood, is regarded as a seat of life, and therefore as a means of transmitting the virtues of the being from which it is taken to the being that partakes of it.

The description of the ancient glories of Erin, as given by enthusiastic historians, may be compared to the mirage of the desert; the mere reflection of distant scenes and the phantasmagoria of Roman and Eastern civilization, which the writers, imagining it ought to have existed, finally depicted as if actually existing.

Facts, when transmitted by word of mouth merely, gradually lose individuality and definiteness as to time; they pass rapidly into the class of myths; thus true history may be said to begin only with the introduction of writing, and alphabetical writing in Ireland does not date before the early centuries of the Christian era. According to native annalists, Erin burst suddenly on the gaze of mankind in a state of civilization, without undergoing intermediate stages of improvement. No nation, it is believed, suddenly developed a

self-created civilization; it must progress even as a man who passes from tottering infancy through successive stages of advancement; and it has been remarked that the savage, hunting, pastoral, and agricultural phases of advance in the nation, correspond with those of infancy, childhood, youth, and manhood in the individual.

These stages are, it is thought, plainly traceable in Ireland. First comes the period when primitive man, the megaceros, the rein-deer, and other animals shared the country, man being then only in his infancy or rude flint-using stage. This race of men disappears from archæological observation—either exterminated or amalgamated by a succeeding race, who used stone weapons more carefully made and polished; this stage is the nation's childhood. Then appears bronze-using man —this stage is the nation's youth. Like their predecessors, however, they were also in a state of savagery. By the term 'savagery' it is not implied that there was amongst them a total absence of culture, but that they were devoid of the ordinary arts of then existing civilization. The mere fact of the aborigines being ignorant of the use of cement in building, prior to the introduction of Christianity, proves this. If writing had been introduced into ancient Erin, or if any general or constant means of communication existed between the Continent and Ireland, the practice of reducing limestone into a suitable material for solidifying their stone structures would have come into general use.

Since the publication of Petrie's Essay on the theories of the origin of the Round Towers of Ireland, the progress of archæological investigation has been almost at a standstill; and until the huge mass of undigested matter, now accumulated in the pages of learned societies, has been assimilated, the mere recording of

discoveries has perhaps, for the time, gone far enough. Archæology is suffering from a plethora of 'finds,' the relative importance and age of which, with regard to the date of the earliest of the round towers, have not yet been determined. The proper standpoint and method of investigation have been lost sight of; one part of the puzzle should first be arranged in proper order, and the remainder must in due time drop into the right position. Practical experience in actual exploration is necessary to form a good archæologist; no amount of head knowledge can make up for deficiency of spade knowledge, for as in the quarry the pick of the workman brings to light remains of animals and plants long since passed away, so on prehistoric sites the spade of the archæologist turns up traces of the works of early man and of his primitive surroundings. Examination of articles is preferable to mere book knowledge, and careful study of any large collection of antiquities will impart more insight into the manufacturing skill of the ancient inhabitants of the land than can be otherwise obtained.

Some problems it is impossible to investigate too minutely, and amongst these, few are of more general interest than those which relate to the origin and development of civilization. Could we catch a glimpse of the remote past, we should probably find that many primitive progressive advancements were the outcome of accident. Primitive man stumbled upon a discovery, and had wisdom enough to profit by it; modern man, on the other hand, starts with a definite idea in view and carefully experiments for its realization. This is the secret of the slow advance of culture in ancient days, and of its cumulative progress when resulting not from mere accident, but from well directed brain-work.

The great antiquity of the existence of man upon the earth may now be considered an established fact, but, save rude implements found in the gravels, it must be admitted that few traces of mere rude flint-using man have been disinterred in Ireland. It would appear as if the reindeer and megaceros hunters employed Neolithic as well as Palæolithic implements. If so, the connecting link becomes apparent between the two periods when rude-stone weapons and those that were formed with more care were in use, when an old era vanished, and a new era began ; but in Ireland there seems at present, as far as sound archæological observation goes, a decided break between the rude-flint-using age and the polished-flint period. In several instances a Neolithic folk found large cores, flakes, and implements of Palæolithic type, weathered and deeply crusted, and they re-wrought and finished them after the new method ; thus it is evident that between the two stone ages a period elapsed sufficient to form a thick glazed crust on the outside of the older implements ; at present it may be said that the well known Neolithic Age is a mere drop in the ocean of time, when compared with the vast period through which Palæolithic man is now known to have existed elsewhere.

It is unlikely that, even at the remote period in question, Ireland had any land connection with Great Britain or the Continent. The only great fossil mammals then known to have been in existence were the megaceros, reindeer, bear, and mammoth ; and of the latter, the evidence is very doubtful. Traces in Ireland of the great ancient fauna of Britain are, up to the present, conspicuous by their absence, they would certainly have been met with had there been a continuous land surface; but the sea placed an insuperable barrier to their appear-

ance in Ireland. It must, however, be mentioned that the land has been again and again subjected to the grinding action of land ice, and also to the destructive agency of the sea; thus it is possible that the great southern fauna of Britain and Palæolithic man may have been cotemporary in Ireland, but if so, glaciers, sea-ice, and the waves and currents of the ocean have obliterated the evidence of their presence. If at a later date the climate again became glacial, the megaceros and reindeer could, at certain periods, migrate from north Britain to Ireland across the frozen sea. Floating ice was depositing rocks and boulders on the bed of the shallow sea—many of these were utilised long ages afterwards by Neolithic man in the construction of rude stone receptacles for his dead—whilst glaciers were scooping out the valleys and moulding those features in the landscape with which we are so familiar.

Let us picture to ourselves the west coast of Ireland as another Greenland; its sea loughs filled with icebergs derived from the glaciers that occupied the adjacent valleys; those in turn supplied from the great ice sheet that covered the entire island during the glacial period; ice not at rest, but slowly and surely grinding onwards towards the sea through the pressure of its enormous mass. In this manner the metamorphic rocks found scattered over the Carrowmore district near Sligo have been carried several miles towards the north-west. Such is the direction in which the ice-markings trend in this part of the country; these rocks had fallen at intervals from the cliffs of the Ox mountains on to the existing glaciers which bore them onwards, depositing them where they are found resting on the Carboniferous limestone, 'erratic' specimens of the 'metamorphic ridge,' as the Ox range is termed by

geologists. Numbers of these boulders have been utilised for sepulchral monuments. To similar uses have been put some of the huge 'travelled blocks' of limestone found at Moytirra, an elevated district in the same county. These did not journey far from the same rock found *in situ*, and since reaching their present position have weathered into masses more or less rectangular, fewer in number, some of vastly greater size, than the boulders of Carrowmore. Few places in the British Isles exhibit the extreme effects of glaciation better than parts of the county Sligo.

The Glacial Age, however, does not appear to have comprised only one period of continuous and intense cold, but a prolonged time during which there were several alterations in temperature, the ice at one period increasing and advancing over the surface of the land, at another retiring as the climate ameliorated, yet after each advance contracting beyond its original base, retreating at length to the mountains, then finally disappearing, for a change considerably for the better appears to have come over the scene of desolation, and the flora and fauna of more temperate climes overspread the country. With this change of climate Neolithic man appears.

How long the prehistoric period may have lasted, or how long it may have taken to develop the state of things apparent when Erin first comes under authentic historical notice is matter for conjecture; all that can be inferred is that it must have covered a long period of time, immeasurably longer than from the introduction of Christianity to the present day. Archæologists may wrangle as to whether iron was introduced before or after the commencement of the Christian era; the exact century of its introduction is,

for practical purposes, unimportant; let it suffice that its appearance belongs to historic times as regards the British Isles.

There can be no more conclusive test of the exact state of prehistoric civilization than that which is afforded by the general knowledge and use of metals. Of the savage tribes of Africa, some are well acquainted with iron, and therefrom manufacture weapons; they are also possessed of gold; but when we come to the use of metals which require great experience in mining to recognize in their natural state, and when we find a composite metal, of which the parts are mixed in proper proportions, we arrive at a very advanced stage of metallurgy; not necessarily to the use of iron, but still to an advanced state of manufacture not attained in Ireland before the advent of Christianity, for in Ireland the formation of bronze and the presence of alloy in gold were most probably due to natural alloys in the ore.

Let us be honest and unbiassed. Supposing we did not possess the fanciful Irish Annals, how would archæology have been written? Where are the inscriptions setting forth the acts of kings and their conquests, with all the pomposity of barbaric pride, such as have been left by the rulers of the Eastern and Western Empires? Where are traces of the temples of the Gods? Where are the remains of ancient cities? We possess many assertions as to the past glories of the land, but these assertions are not supported by material remains. It is clear that when the East was at the height of its civilization, our ancestors were mere savages, and were but little better, in later times, when Rome was at the zenith of her glory. Why make ourselves ridiculous to present-day culture by

seeking to place the past of ancient Erin on an eminence which existed merely in the imagination of early monkish chroniclers. Let us bring simple common sense into play, and not acquiesce in statements solely because they appear in Irish MSS. of a by no means ancient date—records such as the peopling of Ireland before the flood, of the total extinction of this race who yet left behind them a record of the event, and the thousand and one other absurdities which it is considered unpatriotic not to believe. In treating of the past of ancient Erin, a writer must neither care for, nor be influenced by, public opinion, and must be a thorough-going 'hunter after truth.'

From a review of the past, as illustrated by the remains left by its inhabitants, there was apparently a slow but constant progress in the ascending scale of civilization; no sudden transition from savagery to culture, but an amelioration in the general status of society, which at the period of the introduction of iron had placed the inhabitants above the class of many tribes of present-day savages.

Ireland, until well advanced in the Christian era, appears to have been peopled by an aggregation of tribes, isolated from the European continent, and developing their civilization in a manner more or less peculiarly their own.

When Irish society became known to the classic world—and Latin authors are by no means complimentary to its manners and customs—it was already well advanced in this the tribal stage; and it is interesting to reflect that these writers, when applying the terms 'barbarians' and 'savages' to the inhabitants of Ierne and the Britannic Isles, little dreamt that the despised islanders—recruited, however, by the subse-

quent accession of much northern and truly 'barbarian' blood—would found an empire far surpassing that of Rome, and extend their sway over regions and continents then unheard of. A number of tribes are enumerated by classic authors, but no mention is made of a monarch exercising universal sway as described by later native writers. The Irish were merely in the intermediate stage of the development of a nation; they had passed the limits of the family, and were in the tribal stage in which, from a variety of causes, the mass was at length welded together into a more or less compact body.

Weapons, whether of flint or bronze, were of home manufacture; gold was a product of the Wicklow mountains; silver in smaller quantities and at a much later period appears to have been extracted from native ores, but silver articles are not relics of pagan times; it will probably be yet found that amber, jet, and glass ornaments were all formed in our island. It is well to note that no really ancient coin has as yet been conclusively proved to have been discovered in Ireland; the majority of coins are from Roman mints, and bear date about the time of the break-up of Imperial Rule in Great Britain. It is certain that the Irish possessed no coined money, and there can be little doubt but that, at even a late period, the precious metals were, amongst them, valued by weight as a circulating medium, sometimes as ingots, possibly also in the form of rings; hence probably the frequent employment of the epithet 'extractors of rings,' as applied to the northern invaders by native annalists. These northmen were the first to issue coined money in Ireland.

Increased knowledge of the contents of various collections of antiquities, and taking a common sense view of

the probable cause of their fabrication, leave very few articles, the use of which may not fairly be assigned, yet Irish archæology is not in a sufficiently advanced state to allow of a comprehensive classification of the various materials belonging to the stone and bronze ages.

Iron and Christianity were introduced into the country within an approximately short period of each other, for although iron may in small quantities have found its way into Ireland, through the ordinary channels of commerce then open, at, or just before, the commencement of the Christian era, yet iron ingots or iron articles so acquired would be comparatively few in number. The rectangular iron bells of the early missionaries—examples, it is alleged, of primitive Christian native metal work—are of rude and unfinished manufacture; it was evidently a trade at which they were novices, though their work in bronze and gold had been brought to great perfection. The fine bells of the late bronze period, as witnessed by the Dowris find, are in finish and design infinitely superior to the wretched productions alleged to have belonged to the early Irish saints. The development of Irish art after the introduction of Christianity was the outcome of the mixture of the two styles of ornamentation, the Irish or Pagan, and the continental or Christian.

Hitherto when any peculiar antique, composed either of metal or other material, has been for the first time discovered, Irish Archæologists assigned to it a foreign, frequently a Roman origin, yet these waifs of time are, in general, ultimately identified as of home manufacture. Exceptional specimens should therefore be temporarily adjudged, until the contrary is demonstrated, as being of native workmanship, and not imported articles.

The absurd theories started by visionary antiquaries of the last century have greatly retarded the proper study of the ancient religion, or religions, professed by the pre-Christian inhabitants of Erin. Palæolithic man, with his religion, if he possessed any, has vanished, leaving little trace. Neolithic man believed in a future state resembling that passed by him on earth, as is witnessed by the articles buried with his dead, and this belief probably developed finally into some dim conception of a future spiritual life. They were ancestor worshippers, and their religion consisted in communion with the dead, and offerings to them. The ghosts of their ancestors were friendly; the ghosts of members of other tribes were inimical: for, except with those of his own tribe, primitive man lived in a state of isolation; he was unsociable, and feared and hated other men: hence, probably, the origin of good and evil spirits. In fact the aborigines possessed the fundamental beliefs held by primitive mankind throughout the globe. The important position ascribed to goddesses in ancient Irish religious belief is very noticeable, and it was doubtless owing partly to the associations of maternity and the train of thought following therefrom. This development in religious ideas occurred at an advanced stage of mental expansion, when savage man had, to a certain extent, ceased to ascribe to material objects a life analogous to animated nature, and when the gods were regarded as semi-spiritual beings, and as guardians or rulers of the tribe. Traces of the elder faiths have been described as far as present knowledge permits, as also the distinct indications of the long continued struggle between Christianity and Paganism, the former gradually overcoming the latter; in popular usage adopting much, however, from

the conquered faith. Such is almost invariably the case, more especially when the conquerors are numerically inferior to the conquered. Owing to the wild and unsettled condition of the country, teachers must have been scarce, and there could not have been that oversight from any responsible and restraining authority which would keep the standard of Christian doctrines pure amongst the various warring tribes.

Christianity, coming, as it did, with a superior civilization, must have early forced its way into a recognized place, at first barely tolerated, then on equality with the older religion, which, when it attained ascendancy, it finally ended by persecuting. In this upward course it merely followed the natural order of events, and the bent of human nature in all ages. The theory of a sudden and complete conversion of Ireland from Paganism to Christianity is incompatible with the survival of so much that is distinctly Pagan in the thoughts and practices of the peasantry. In many ancient cemeteries in connexion with the earliest monastic establishments in Ireland, graves formed in pagan fashion are of by no means rare occurrence, demonstrating that in material as in spiritual matters there was a gradual and easy transition from one religion to the other. The tombs of the early Christians present a variety of forms, rude sarcophagi resembling cromleacs, cistvaens or small carns enclosed by a circular wall of uncemented stones. Near the Sugar-Loaf Hill a cromleac stands in a churchyard, and there is another cromleac-like grave in a Christian burial-place in the county Leitrim. Repeated instances appear to prove the existence of pagan burying grounds which the early missionaries selected for the burial of their converts. The direction in which these early graves point is

generally east and west; but in a cemetery adjoining a very early Church at St. John's Point, county Down, and also in other localities, the cists are arranged in a pagan manner in the form of a circle, the feet of the skeletons pointing to the centre of the circle.

Probably many people believe that druidism* had no footing in the land, yet numerous singular customs have been produced, by some cause, which, to their first observers, was a religious one; the religious aspect of the rites has been gradually obscured and in some cases finally lost, but the customs have been carried on, in almost stereotyped form, from the days in which they were practised by mere savages, and if these customs be compared with passages, illustrative of rites and observances described in ancient Irish MSS., there will probably be discovered for us the secret of the religious system of our heathen ancestors, and we shall see disclosed the means by which the early Christian Church in Ireland dissolved and absorbed the old Pagan Pantheon.

It is a difficult process to trace back to their original source some chains of thought still current, and to see what ideas which have revolutionized the world were like in their infantine beginnings; for in the present day no one can fully understand the mental standpoint, or even the ideas of civilization on which the ancient inhabitants based their everyday life; primitive man, as a rule, has no wish for change, in fact, no ideas enter his mind which tend to effect a transformation in his everyday existence. The trans-

* Diodorus, describing the customs of druids elsewhere, designates them 'Saruides.' According to P. W. Joyce, the Irish peasantry still apply the term *sean-drui, i. e.* an old druid, to a crabbed cunning old man.

forming motor, in Ireland, came through the introduction of a new religion; its philosophy and classic modes of thought woke the slumbering mass of the unreasoning multitude to new and intellectual life. The early Christian missionaries, in essaying to wean the masses from long-established Paganism, did not attack time-honoured usages directly in front, but turned their flank; thus, instead of exterminating the enemy, they only routed and scattered them, here and there detached bodies remained, which still offered a resolute, though in general passive resistance; sometimes there occurred a rally, and Christianity was checked in its conquering career. For nearly fifteen hundred years there existed two forms of religion, side by side, the traditional creed believed in by the mass of the people, and the worship of those who held the Christian faith; at length the antagonism between the two ceased, by the almost entire absorption of the former by the latter, and traces of heathenism are now only to be detected by the differences apparent between the religion of the educated and of the uneducated, for experience demonstrates that primitive beliefs are practically indestructible; new ideas overlie the old, but do not extinguish them, for primitive rites, which have been banished for centuries from religion as publicly practised, are kept alive in local superstitions. When an older religion has given place to a younger, the old divinities are apt to be treated in very cavalier fashion, yet customary observances nevertheless continue; traces of this are clearly discernible in popular proverbs, customs, and folk-lore, for worships that contain heathenish elements are to a great extent traditional, and nothing is more foreign to them than the introduction of forms for which there is no precedent. The benefits

which modern education has conferred, in freeing the majority of the masses from the bondage of old ideas, can only be properly appreciated when the fatal consequences of beliefs in ancient superstitions in Ireland are brought to the light of day.

The difficulty of presenting a clear account of a country's antiquities is only too evident, but we have long passed the time when statements are admitted without question simply because they were made at a remote period. We call to mind, now-a-days, that the so-called 'historical' Irish writers were probably often as far removed from the events they pretend to explain as they are from our own times. Our more critical age takes account of what may be called the historical perspective. Certainly the 'age of faith' which could accept unquestioned the imaginative statements of mediæval history-writers has long passed, and it is by patient work and study, not only of ancient writers, but still more of the strange waifs which have come down to us from bygone ages that we hope to arrive at some idea of the life of prehistoric man. Truth, it is said, lies at the bottom of the well; it is difficult, but not impossible to reach; its certain and eventual triumph over error will become a recognized fact, in material, as well as in moral matters.

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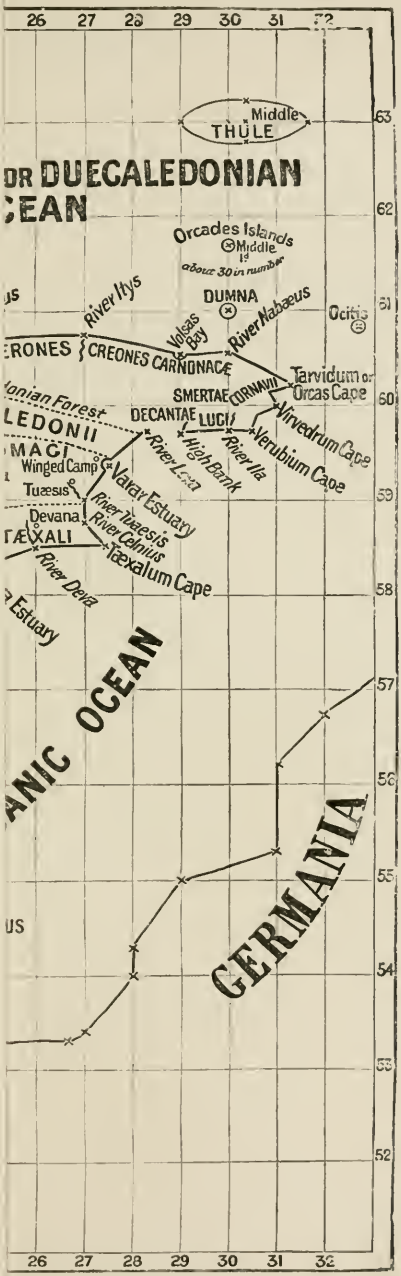

, *Pagan Ireland.*)

d from *The Archæologia*, vol. xlviii.

BIBLIOGRAPHY OF PAPERS AND WORKS

On Irish Pre-Christian Archæology

WHICH CAME UNDER THE WRITER'S NOTICE.

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BIBLIOGRAPHY.

I.—*AMULETS, MAGICAL-, CURSING-STONES, &c.*—

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(CHAPS. III. AND V.)

1 **Atkinson, G. M.:**
Imokelly Amulet.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 440–444.

2 **Brady, Dr. Maziere:**
Swearing Stones.—*Records of Cork, Cloyne, and Ross:* Dublin, vol. i., p. 190.

3 **Caulfield, Dr.:**
Garnavilla Amulet.—*Journal R.H.A.A.I.*, vol. v., 4th series, p. 347.

4 **Graves, Rev. James:**
Amulet for the cure of Sore Eyes.—*Journal Kil. A. Society*, vol. i., new series, pp. 149–150.

5 **Hewson, George J.:**
Madstone.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 470, 471.

6 **Kinahan, G. H.:**
Madstones.—*Journal R.H.A.A.I.*, vol. ix., 4th series, p. 72.

7 **Patterson, W. H.:**
Antiquities in S. W. Donegal.—*Belfast Nat. Field Club*, 1871, pp. 54, 55.
Healing Stone.—*Journal R.H.A.A.I.*, vol. i., 4th series, p. 469.

8 **Petrie, George, LL.D.:**
Account of certain Stones.—*Proc. R.I.A.*, vol. iv., pp. 273, 274.

9 **Wilde, Sir W. R., M.R.I.A.:**
Altar Stones.—*Cat. Mus. R.I.A.*, pp. 131, 132.

10 **Wood-Martin, Col. W. G., M.R.I.A.:**
Cursing and healing Stones.—*History of Sligo*, vol. iii., pp. 360–369.

II.—*ANTIQUITIES IN GENERAL.*—(CHAPS. I.–XIV.)

11 **Ball, Robert:**
Means used by the ancients for attaching handles to metal implements.—*Proc. R.I.A.*, vol. ii., pp. 511–513.

12 **Day, Robert, jun., F.S.A.:**
Antiquities at Cork Industrial Exhibition, 1883.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 210–213.

13 **Du Noyer, G. V.:**

Drawings of Irish Antiquities.—*Proc. R.I.A.*, vol. vii., pp. 249–262, 302–315; vol. viii., pp. 61–67, 282–289, 429–441.

14 **Grainger, Rev. D., M.R.I.A.:**

Diggings of an Antiquary.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1880, pp. 48–52.

15 **Graves, Rev. James:**

What we learn from Wilde's 'Catalogue' Museum R.I.A.—*Journal Kil. A. Society*, vol. ii., new series, pp. 110–139.

16 **Gray, William:**

Report on the Glenny Collection.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 162, 163.

17 **Griffiths, Richard:**

Antiquities presented by the Shannon commissioners to the Museum R.I.A. —*Proc. R.I.A.*, vol. ii., pp. 312–316.

18 **Hitchcock, Richard:**

Miscellaneous Antiquities.—*Trans. Kil. A. Society*, vol. i., pp. 140, 141.

Archaeological Court of the Exhibition of 1853.—*Trans. Kil. A. Society*, vol. ii., pp. 280–295.

19 **Jones, Colonel:**

Antiquities found in the River Shannon.—*Proc. R.I.A.*, vol. ii., pp. 594, 595.

20 **Joyce, P. W., LL.D.:**

Origin and History of Irish Names of Places.—(First and Second series), Dublin, 1875.

21 **Kemble, J. M.:**

Utility of Antiquarian Collections in relation to the Prehistoric Annals of Europe.—*Proc. R.I.A.*, vol. vi., pp. 462–480.

22 **Kinahan, G. H.:**

Geology of Ireland.

23 **Milligan, Seaton F.:**

Archaeological Exploration.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1886–7, pp. 40–54.

24 **Mulvany, W. T.:**

Collections of Antiquities made by the Officers of the Board of Works.— *Proc. R.I.A.*, vol. v., pp. 239, 243–245.—Appendix, No. 2.

25 **Patterson, William H., M.R.I.A.:**

Description of the 'Benn Collection' Belfast Museum.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 294–303.

The Benn Collection of Antiquities.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1882, pp. 1–17.

26 **Pownall, Governor:**

Account of some Irish Antiquities.—*Archaeologia*, vol. iii., pp 355–370.

27 **Prim, Mr.:**

Antiquities discovered in trenching a small rath.—*Journal Kil. A. Society*, vol. iii., new series, pp. 307, 308.

28 **Robinson, Rev. T. R., D.D.:**

Contents of an ancient bronze vessel.—*Proc. R.I.A.*, vol. iv., pp. 237–239.

29 **Todd, Rev. J. H., D.D.:**

Antiquities presented by the King of Denmark and the Royal Society of Antiquaries of Copenhagen.

On the same: PETRIE, George.—*Proc. R.I.A.*, vol. iv., pp. 250–253.

30 **Trevelan, Mr.:**

Letters on Irish Antiquities.—*Ulster Journal of Archaeology*, vol. v., pp. 150–155, 185–187, 336–342.

31 **Vallancey, General Charles:**

Collectanea de Rebus Hibernicis (valuable as a contribution to general knowledge: facts correct, theories baseless). 6 vols.

32 **Wakeman, W. F.:**

Archaeologia Hibernica: a Hand Book of Irish Antiquities, Pagan and Christian (2nd edition).—Dublin, 1891.

33 **Westropp, Hodder M.:**

Prehistoric Phases or introductory Essays on prehistoric Archaeology. —London, 1872.

34 **Wilde, Sir W. R., M.R.I.A.:**

Catalogue Museum R.I.A.—Dublin, 1857.

Lough Corrib, its Shores and Islands.—Dublin, 1872.

On Antiquities—weapons, ornaments, domestic implements, sepulchral urns and some animal remains found in ancient tumuli.—*Proc. R.I.A.*, vol. iii., pp. 260–263.

Statement on the presentation of Certain Antiquities.—*Proc. R.I.A.*, vol. viii., pp. 324–330, 428.

The Beauties of the Boyne and its tributary the Blackwater.—Dublin, 1849.

35 **Worsaae, J. J. A.:**

Classification of Antiquities found in West Europe.—*Proc. R.I.A.*, vol. iii., pp. 310–315, 327–344.

III.—*ARCHITECTURE.*—(CHAP. VI.)

36 **Anonymous:**

Description of an ancient Building on Greenan Mountain, Donegal.—*Dublin Penny Journal*, vol. iii., pp. 340, 350.

Note on Vitrified forts.—*Journal R.H.A.A.I.*, vol. viii., 4th series, p. 344.

37 **Beaufort, L. C.:**

Architecture and antiquities previous to the landing of the Anglo-Normans.—*Trans. R.I.A.*, vol. xv., pp. 101–242.

38 **Bernard, Dr. Walter:**

Restoration of the Grianan of Aileach.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 415–423.

39 **Bland, F. C.:**

Description of Staigue Fort (1821).—*Trans. R.I.A.*, vol. xiv., pp. 17–20.

40 **Crowe, J. O'Beirne:**

Origin and meaning of the word 'clocan,' as applied to a class of Irish pagan and early Christian buildings.—*Journal R.H.A A.I.*, vol. i., 4th series, pp. 328–330.

41 **Du Noyer, George V., M.R.I.A.:**

Remains of ancient stone-built fortresses and habitations occurring to the west of Dingle, Co. Kerry.—*The Archaeological Journal*, pp. 1–24.

42 **Dunraven, Edwin, Third Earl of:**

Notes on Irish Architecture.—London, 1875, 2 vols.

43 **Haverty, Martin:**

The Aran Isles, &c.—Dublin, 1859.

44 **Kirker, S. K., C.E.:**

Resemblance between some Ancient Remains in Greece and Ireland.—*Journal R.S.A. Ireland*, vol. iv., 5th series, pp. 271–279.

45 **Kinahan, George, F.R.G.S.I., M.R.I.A.:**

Ancient Villages, &c.—*Proc. R.I.A.*, vol. x., pp. 25–30.

Cromleac-like Doorway to a Less or earthen fort.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 282–284.

Ruins of Ardillaun, &c.—*Proc. R.I.A.*, vol. x., pp. 551–555.

46 **Milligan, Seaton F., M.R.I.A.:**

Ancient forts. &c.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 574–582.

Irish hot-air bath.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 268–270.

Irish hot-air bath. — *Proc. Belfast Nat. Hist. & Phil. Society*, 1889–90, pp. 37–41.

47 **Molyneux, Thomas, M.D.:**

A Discourse concerning the Danish Mounts, Forts, and Towers of Ireland. —London, 1725.

48 **Moore, Rev. W. P.:**

On a Vitrified Fort.—*Proc. R.I.A.*, vol. v., p. 69.

49 **Mulcahy, Rev. D. B.:**

An ancient Irish hot-air Bath. — *Proc. R.S.A.I.*, vol i., 5th series, pp. 589, 590.

50 **Otway, Rev. Caesar:**

Vitrified fort.— *Trans. R.I.A.*, vol xiii., pp. 123–127.

51 **Petrie, George, R.H.A.:**

Architecture anterior to the Anglo-Norman invasion.—*Trans. R.I.A.*, vol. xx.

52 **Wakeman, W. F.:**

The hot-air bath.—*Proc. R.S.A.I.*, vol. i., 5th series, p. 165.

Dunnamoe Cashel, Co. Mayo.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 182–183.

53 **Westropp, Thomas Johnston:**

Antiquities of Tara.—*Journal R.S.A.I.*, vol. iv., 5th series, pp. 232–242.

Prehistoric stone forts of central Clare.—*Journal R S.A.I.*, vol. iii., 5th series, pp. 281–291, 432.

Sweat House near Eglish.—*Journal R.S.A.I.*, vol iv., 5th series, p. 180.

54 **Windele, John :**
Cahir Conri.—*Ulster Journal of Archaeology*, vol. viii., pp. 111–126.

55 **Writers, various :**
Cyclopean ruins near Dundalk. Vallancey's *Collectanea De Rebus Hibernicis* (No. 10). Wright's *Louthiana*.—*Ulster Journal of Archaeology*, pp. 234, 235.

IV.—*BOG BUTTER.*—(CHAP. IX.)

56 **Frazer, W., F R.C.S.I. :**
Bog butter.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 583–588.

57 **Hitchcock, Richard :**
Discovery of a quantity of Bog butter.—*Trans. Kil. A. Society*, vol. iii., pp. 175–178.

58 **M'Evoy, Mr. :**
Bog butter.—*Journal Kil. A. Society*, vol. i., new series, p. 148.

59 **O'Laverty, James :**
Bog butter.—*Ulster Journal of Archaeology*, vol. vii., pp. 288–294.

60 **O'Laverty, Rev. James :**
Why butter was buried in bogs.—*Journal R.S.A.I.*, vol. ii., 5th series, pp. 356, 357.

61 **Wilde, Sir W. R., M.R.I.A. :**
Bog butter.—*Cat. Mus. R.I.A.*, pp. 267–269.[1]

V.—*BRONZE.*—(CHAP. X.)

62 **Allman, Professor :**
Ancient Copper mine.—*Proc. R.I.A.*, vol. iv., pp. 64–66.

63 **Anketell, M. J. :**
A collection of Shoes of bronze.—*Proc. R.I.A.*, vol. v., pp. 27–29.

64 **Anonymous :**
Ancient bronze brooches.—*Dublin Penny Journal*, vol. iv., pp. 45, 46, 56.
On the use of certain antique bronze articles.—*Ulster Journal of Archaeology*, vol ix., pp. 271–277.
Antiquities discovered on the shore of Ballynass Bay.—*Ulster Journal of Archaeology*.—vol. vi., pp. 351–353.

65 **Armstrong, Rev. Wm :**
On certain bronze antiquities.—*Proc. R.I.A.*, vol. iv., pp. 360, 370.

66 **Atkinson, George M. :**
Bronze ring found in a kist, Ballinling West, Co. Cork.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 638-640.

67 **Ball, Robert :**
On the Crotal.—*Proc. R.I.A.*, vol. iii., pp. 135, 136.

68 **Bell, Dr. William :**
On Ring Money.—*Proc. R.I.A.*, vol. viii., pp. 253–268.

69 **Beranger, Gabriel:**

Bronze implement.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 123, 124.

70 **Betham, Sir William, M.R.I.A.:**

On an astronomical instrument.—*Trans. R.I.A.*, vol. xvii., pp. 3–6.

71 **Brenan, Rev. Samuel Arthur:**

Supposed workshop of Bronze articles.—*Journal R.H.A.A.I.*, vol. vi., 4th series, p. 439.

72 **Browne, Arthur, S.F.T.C.D.:**

Ancient Trumpets dug up in a bog near Armagh.—*Trans. R.I.A.*, vol. viii., pp. 11, 12.

73 **Carruthers, Mr.:**

Instrument of bronze.—*Trans. Kil. A. Society.*—vol. iii., pp. 64, 65; *Dublin Penny Journal*, vol. i., p. 324—George Petrie.

74 **Clibborn, Edward:**

On the discovery of iron cores in certain bronze antiquities in the Museum R. I. A.—*Proc. R.I.A.*, vol. iii., pp. 299–301.

75 **Coffey, George:**

Classification of Spear-heads of the bronze age.—*Proc. R.I.A.*, vol. iii., 3rd series, pp. 486–510.

76 **Cooke, Thomas L.:**

Bronze antiquities found at Dowris, King's County.—*Proc. R.I.A.*, vol. iv., pp. 423–440.

77 **Day, Robert, jun., M.R.I.A.:**

Irish bronze War Trumpets.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 422–432.

Find of fragmentary bronze articles.—*Journal R.H.A.A.I.*, vol. i., 4th series, p. 120.

Bronze leaf-shaped sword, retaining the original bone handle.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 23–25.

Discovery of a hoard of bronze antiquities.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 265, 266.

78 **Dillon, Hon. L. Gerald:**

Bronze leaf-shaped sword.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 19, 20.

79 **Donovan, M.:**

Analysis of the gold-coloured Bronze antiquities found at Dowris, King's County.—*Proc. R.I.A.*, vol. iv., pp. 463–470.

80 **Du Noyer, George V.:**

Classification of bronze arrow-heads.—*Arch. Journal*, vol. vii., pp. 281–283.

Classification of bronze Celts.—*Arch. Journal*, vol. iv., pp. 1–6, 327–337.

81 **Editor Ulster Journal of Archæology:**

African and Irish fibulae.—*Ulster Journal of Archaeology*, vol. v., pp. 240–248.

Bronze pin found near Ballymoney, County Antrim.—*Ulster Journal of Archaeology*, vol. v., p. 157.

Bronze spear-head.—*Ulster Journal of Archaeology*, vol. iii., pp. 777, 778.

On two bronze fibulae.—*Ulster Journal of Archaeology*, vol. v., pp. 347, 348.

On two bronze fibulae.—*Ulster Journal of Archaeology*, vol. vi., pp. 103, 104.

82 **Evans, John, D.C.L., &c., &c.:**

The ancient Bronze Implements, weapons and ornaments of Great Britain and Ireland.—London, 1881.

83 **Frazer, W., F.R.C.S.I.:**

On three bronze celts found in Co. Mayo.—*Proc. R.I.A.* (2nd series), vol. ii., pp. 417–423.

So-called 'Sickles' of bronze found in Ireland.—*Proc. R.I.A.* (3rd series), vol. ii., pp. 381–390.

84 **Graves, Rev. James, A.B.:**

Bronze Shields.—*Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 487, 488.

Bone-hafted bronze sword.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 257, 258.

Bronze-hafted dagger and a dagger hilt of bronze.—*Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 180, 187.

85 **Hemans, G. W.:**

On presenting some antiquities to the Academy.—*Proc. R.I.A.*, vol. iv., pp. 565, 566.

86 **Hewson, G. J.:**

Finds of Bronze Weapons.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 484, 485.

On two bronze pins.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 67, 68.

87 **Hitchcock, R.:**

On the discovery of bronze celts, &c.—*Trans. Kil. A. Society*, vol. iii., pp. 175–178.

88 **Jones, Colonel H. D., C.E.:**

On certain antiquities.—*Proc. R.I.A.*, vol. iv., pp. 394–396.

89 **Knowles, W. J., M.R.I.A.:**

Report on some recent finds in Co. Antrim.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 107–113.

90 **Langtry, George:**

Bronze Cauldron found at Cape Castle, County Antrim.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 20–23.

91 **Lenihan, Maurice, M.R.I.A.:**

Observations relative to a rare example of an ancient shield.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 118–121.

On an ancient bronze shield.—*Proc. R.I.A.*, vol. i., Pol. Lit. and Ant., pp. 155, 156.

92 **Long, J., C.E.:**

On the age of the various stone and bronze antiquities found during the Shannon Navigation operations, as bearing on the antiquity of man in Ireland.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 264–267.

93 **MacAdam, Robert:**

Ancient Irish Trumpets.—*Ulster Journal of Archæology*, vol. viii., pp. 99–110.

Brazen Cauldron.—*Ulster Journal of Archæology*, vol. v., pp. 82–90.

94 **M'Evoy, D.:**

On a magnificent specimen of an antique bronze Cauldron.—*Trans. Kil. A. Society*, vol. iii., pp. 131, 132.

95 **Martin, James, M.D.:**

On an ancient bronze object.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 88, 89.

96 **Milligan, Seaton F.:**

Hammer and anvil of bronze.—*Journal R.H.A.A.I.*, vol. vii., 4th series, p. 538.

On crannogs in the Co. Cavan.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 148–152.

97 **More, A. G., F.L.S.:**

Ancient bronze implement.—*Proc. R.I.A.*, vol. i., Pol. Lit. and Ant., pp. 25, 26.

98 **Norrey's, Sir Denham Jephson:**

Observations on the mode of constructing a remarkable Celtic trumpet in the Museum R. I. A.—*Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 277–279.

99 **O'Connell, Maurice:**

An account of certain antiquities presented to the Academy.—*Proc. R.I.A.*, vol. iv., pp. 166, 167.

100 **O'Donovan of Lissard:**

Curious object composed of ivory and bronze.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 181, 182.

101 **O'Donovan, John:**

Bronze reaping hook.—*Dublin Penny Journal*, vol. i., p. 108.

102 **O'Gorman, Thomas:**

Bronze dagger with oaken handle still attached.—*Journal Kil. A. Society*, vol. i., new series, pp. 286, 287.

Contents of a sepulchre of the Bronze period.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 164–168

103 **O'Leary, Denis A.:**

Bronze sword and axe.—*Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 11, 12.

104 **Ousley, Ralph:**

Account of three metal Trumpets found in the County of Limerick in the year 1787.—*Trans. R.I.A.*, vol. ii., pp. 3–6.

105 **Patterson, W. H.:**

Bronze hatchet found near Stoneyford, Co. Antrim.—*Journal R.H.A.A.I.*, vol. iii., 4th series, p. 153.

106 **Pegge, Rev. W.:**

Observations on some brass celts and other weapons discovered in Ireland, 1780.—*Archæologia*, vol. ix., pp. 84–95.

107 **P(etrie, George):**

Ancient Irish Bells or Crotals.—*Dublin Penny Journal*, vol. i., p. 376.

Ancient Irish Trumpets.—*Dublin Penny Journal*, vol. ii., pp. 27–30.

Ancient Irish War Club.—*Dublin Penny Journal*, vol. ii., p. 20.

Historical sketch of the past and present state of the Fine Arts in Ireland. *Dublin Penny Journal*, vol. i., pp. 83, 84.

108 Prim, John G. A.:

On some bronze and other antiquities.—*Journal Kil. A. Society*, vol. ii., new series, p. 50.

109 Reade, Rev. George H.:

Ancient bronze antique.—*Journal Kil. A. Society*, vol. i., new series, pp. 104, 105.

Enamelled bridle-bit and boss of bronze.—*Journal Kil. A. Society*, vol. i., new series, pp. 422, 423.

On two bronze antiques.—*Journal Kil. A. Society*, vol. iv., new series, pp. 96, 97.

110 Richardson, C. W.:

Discovery of a number of bronze antiques.—*Journal R.H.A.A.I.*, vol. iii., 4th series, p. 438.

111 Robinson, Rev. T. R., D.D.:

Contents of an ancient Bronze Vessel found in the King's County.—*Proc. R.I.A.*, vol. iv., pp. 237–246.

112 Searanke, J. S.:

On certain antiquities presented to the Academy.—*Proc. R.I.A.*, vol. iv., pp., 388, 389.

113 Stanley, T.:

Bronze pin found in a bog.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 153, 154.

114 Wakeman, W. F.:

Bronze pin.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 97–99.

Ornamented bronze celt.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 258–261.

On the original handle of a fine bronze rapier apparently of whalebone, also a bronze dagger with its haft of the same metal still attached.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 195–198.

On two ancient brooch pins.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 155–160, 439.

115 Wood-Martin, Col. W. G., M.R.I.A.:

See LAKE DWELLINGS.

VI.—*BULLÁNS.*—(CHAPS. V. AND IX.)

116 Kinahan, G. H., M.R.I.A.:

Observations on Bulláns.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 204, 205.

Probable use of Bulláns for bruising grain.—*Journal R.H.A.A.I.*, vol. vi., 4th series, p. 214.

On Bulláns or stone Basins.—*Journal R.H.A.A.I.*, vol. vi., 4th series, p. 174.

117 Martin, James, M.D.:

On Bulláns.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 438, 439.

118 Wakeman, W. F.:

On the Bullán, or Rock Basin.—*Proc. R.I.A.* (3rd series), vol. i., pp. 257–264.

VII.—*CAVES.*—(CHAP. I.)

119 **Adams, A. Leith, F.R.S.:**

Shandon Cave, on the exploration of.—*Trans. R.I.A.*, vol. xxvi., S., p. 187.

120 **Haughton, Professor, M.D., F.R.S.; Macalister, Professor, M.D.; Plunkett, T.:**

Exploration of the Knockninny Cave.—*Proc. R.I.A.* (2nd series,) vol. ii., pp. 465-483.

121 **Plunkett, T.:**

Exploration of the Knockninny Cave.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 329–334.

122 **Wakeman, W. F.:**

An inscribed Cavern.—*Proc. R.I.A.*, vol. x., pp. 327–329.

Cavern at Knockmore, Co. Fermanagh.—*Proc. R.I.A.*, vol. x., pp. 395–397.

Cave of Knockmore.—*Proc. R.I.A.*, vol. x., pp. 229–232.

VIII.—*FICTILIA.*—(CHAP. VIII.)

123 **Anonymous:**

Ancient Urns.—*Dublin Penny Journal*, vol. i., p. 108.

Antiquities of Co. Down.—*Dublin Penny Journal*, vol. iv., pp. 97, 98.

Remarkable ancient cemetery.—*Ulster Journal of Archaeology*, vol. ix., pp. 111–113.

124 **Armstrong, Rev. Wm.:**

Ancient Earthenware Vessel.—*Proc. R.I.A.*, vol. iv., pp. 369, 370

125 **Beauford, William, A.B.:**

Ancient sepulture discovered in the Co. Kildare in the year 1788.—*Trans. R.I.A.*, vol. ii., p. 51.

126 **Benn, Edward:**

Curious discovery of a cinerary urn.—*Journal Kil. A. Society*, vol. v., new series, pp. 133, 134.

Discovery of some cinerary fictilia.—*Journal Kil. A. Society*, vol. iv., new series, pp. 101, 102.

Discovery of urns in Co. Antrim.—*Journal Kil. A. Society*, vol. iii., new series, pp. 216–220.

127 **Buick, Rev. George R.:**

Fresh facts about prehistoric pottery.—*Journal R.S.A. Ireland*, vol. i., 5th series, pp. 433–442.

128 **Carruthers, George A.:**

Cinerary Urns discovered near Dundrum, Co. Down.—*Ulster Journal of Archaeology*, vol vi., p. 164.

129 **Carruthers, James:**

On some antiquities found near Belfast.—*Ulster Journal of Archaeology*, vol. iii., pp. 127, 128.

130 **Cook, Richard** (and other writers):

On sepulchral remains.—*Trans. Kil. A. Society*, vol. i., pp. 136–139.

131 **Courtown, Earl of:**

Discovery of a cinerary urn.—*Journal Kil. A. Society*, vol. iv., new series, pp. 144, 145.

132 **Ffrench, Rev. J. F. M.:**

Cinerary urns discovered at Adamstown, Co. Wexford.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 19, 20.

133 **Frazer, W., M.D.:**

Earthen Vases found at Palmerstown, Co. Dublin.—*Proc. R.I.A.*, vol. x., pp. 336–340.

134 **Geoghegan, Arthur Gerald:**

An account of an interesting fictile vessel.—*Journal R.H.A.A.I.*, 4th series, pp. 29, 30.

Discovery of cinerary fictilia.—*Journal Kil. A. Society*, vol. iv., new series, pp. 304, 305.

135 **Glascott, J. H.:**

On fragments of two large fictile Vessels.—*Trans. Kil. A. Society*, vol. iii., p. 204.

136 **Green, Thomas:**

Urn found in Co. Wicklow.—*Trans. R.I.A.*, vol. i., pp. 161, 162.

137 **Graves, Rev. James:**

Discovery of several sepulchral urns, one with a cover or lid.—*Journal Kil. A. Society*, vol. iii., new series, pp. 168, 169.

138 **Gray, William:**

The Sandhills of Ballintoy.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1887, p. 17.

139 **Hassé, Rev. Leonard, M.R.I.A.:**

Urn-burial on the site of Monasterboice, Co. Louth.—*Journal R.S.A.I.*, vol. ii., 5th series, pp. 145–150.

140 **Kinahan, G. H., M.R.I.A.:**

Notes on some megalithic structures and other ancient remains.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 201–205.

On some peculiarities in sepulchral urns.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 759, 760.

Notice of an urn found at Ballykale, Co. Wexford.—*Journal R.H.A.A.I.*, vol. v., 4th series, p. 744.

On antiquities in the neighbourhood of Drumdarragh, Co. Antrim.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 374–380.

141 **Knowles, W. J., M.R.I.A.:**

Prehistoric Pottery from the Sandhills, and its Antiquity.—*Journal R.S.A.I.*, vol. iv., 5th series, pp. 243–255.

Report on some recent 'finds' in County Antrim.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 107–113.

142 **Lalor, M. W.:**

Description of a discovery of Kists, &c.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 440, 447.

143 **Lecky, Mr.:**

Excavations made in the Pagan cemetery at Ballon Hill.—*Journal Kil. A. Society*, vol. vi., new series, pp. 209, 210.

144 **Lentaigne, J., M.D.:**

On an urn and the fragment of another.– *Proc. R.I.A.*, vol. iv., pp. 187, 188.

145 **Longfield, T. H.:**

Cinerary urns found at Tallaght, Co. Dublin.—*Proc. R.I.A.* (3rd series), vol. ii., pp. 400, 401.

146 **Malcomson, R.:**

Fictile Vessel found in Co. Carlow.—*Journal Kil. A. Society*, vol. iv., new series, pp. 12, 13.

On a fictile Vessel, curiously ornamented.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 252, 253.

147 **Martin, James, M.D.:**

On a cinerary urn.—*Journal R.H.A.A.I.*, vol. v , 4th series, pp. 55, 56.

On a perfect and highly ornamented urn of small size.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 436, 437, 481.

148 **Millen, William:**

Urn burial.—*Ulster Journal of Archaeology*, vol. iv., pp. 270, 271.

149 **Milligan, Seaton. F., M.R.I.A.:**

Cist and urn found near Carrickfergus, and urn discovered near Coleraine. —*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 86, 87.

150 **Moore, John:**

Cinerary urns discovered at Columbkill.—*Journal Kil. A. Society*, vol. v., new series, pp. 328, 329.

151 **Neary, Rev. Mr.:**

Discovery of a remarkably fine fictile Vessel.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 115, 116.

152 **Patterson, W. H.:**

Fictile vessel found at Altegarron, near Belfast.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 506, 507.

153 **Searanke, J. S.:**

On certain antiquities, &c.—*Proc. R.I.A.*, vol. iv., pp. 388, 389.

154 **Sigerson, George, M.D.:**

Observations on some sepulchral urns.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 14–19.

155 **Smith, J. Huband:**

Cinerary urns discovered in the Hill of Rath, near Drogheda.—*Proc. R.I.A.*, vol. ii., pp. 259–261.

156 **Vigors, Colonel P. D.:**

Ancient Grave in the County Carlow.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 491–494.

157 **Wakeman, W. F.:**

Prehistoric remains discovered at Broughderg, Co. Tyrone.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 740–744.

On a pagan cemetery at Drumnakilly, near Omagh, Co. Tyrone.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 499–513, 520, 522, 523.

On some antiquarian discoveries in Co. Cavan.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 183–200.

See also under LAKE DWELLINGS.

158 **Walsh, Rev. Robert, LL.D.:**

Sepulchral urn found in the Parish of Kilbride.—*Proc. R.I.A.*, vol. i., pp. 296–298.

159 **Wilde, Sir W. R., M.R.I.A.:**

Catalogue Mus. R.I.A., pp. 169–194.

Cinerary urn found near Bagnalstown.—*Proc. R.I.A.*, vol. iv., pp. 35, 36.

160 **Wood-Martin, Col. W. G., M.R.I.A.:**

See LAKE DWELLINGS.

IX.—*FLINT AND STONE IMPLEMENTS.*—(CHAP. IX.)

161 **Ball, Robert:**

Means used for attaching handles to stone implements.—*Proc. R.I.A.*, vol. ii., pp. 511–513.

162 **Belfast Nat. Field Club** (1st Report):

Report of the Committee appointed to investigate the Larne Gravels and determine the position in them of the Flint Flakes and Cores for which they are noted.—*Proc. Belfast Nat. Field Club* (series ii.), vol. ii., pp. 519–530.

(2nd Report, PRAEGER, R. L., Sec.), Report of a Committee of Investigation on the Gravels and associated Beds of the Curran at Larne.—*Proc. Belfast Nat. Field Club* (series ii.), vol. iii., pp. 198–210.

(PRAEGER, R. L., Sec.), Report of the Sub-Committee appointed to investigate the Gravels of Ballyrudder, Co. Antrim.—*Proc. Belfast Nat. Field Club* (series ii.), vol iii., pp. 518–525.

163 **Benn, Edward:**

Flint implements, Co. Antrim.—*Journal Kil. A. Society*, vol. v., new series, pp. 294–300.

164 **Buick, Rev. George Raphael, A.M.:**

Flint work-shop sites.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 120–126.

Irish Flint Arrow-Heads.—*Journal R.S.A.I.*, vol. v., 5th series, pp. 41–63.

The development of the knife in flint.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 241–248.

165 **Carruthers, James:**

Antiquities found near Belfast.—*Ulster Journal of Archaeology*, vol. iii., pp. 127, 128.

166 **Clibborn, E.:**

Probable age of flint instruments found in Gravel Beds.—*Ulster Journal of Archaeology*, vol. vii. pp. 324–333.

167 **Cody, P.:**

Stone Mould.—*Journal Kil. A. Society*, vol. iv., new series, pp. 307, 308, 380.

168 **Day, Robert, jun., F.S.A.:**

Flint flakes from the neighbourhood of Belfast.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 147, 148.

Flint implements found on Toome Bar.—*Journal Kil. A. Society*, vol. v., new series, pp. 227, 228.

169 **Du Noyer, G. V.:**

Worked flints.—*Journal Royal Geological Society*, Ireland, 1868.

170 **Evans, John, F.R.S., &c.:**

Ancient stone implements, weapons, and ornaments of Great Britain, pp. 640.—London, 1872.

Stone Implements in Lough Neagh.—*Archaeologia*, vol. xli., pp. 397–408.

171 **Ffrench, Rev. J. F. M.:**

Small object in stone.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 287, 288.

On two flint Celts.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 342, 343.

172 **Frazer, W., F.R.C.S.I., &c.:**

Polished Stone implement.—*Proc. R.I.A.* (3rd series), vol. i., pp. 216–220.

Sandstone Mould.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 289–291.

Small hammers.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 293, 294.

173 **Gray, William, M.R.I.A.:**

Character and distribution of the rudely worked flints of the North of Ireland.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 109–143. (Contains a bibliography of papers on the subject up to date.)

Co. Antrim raised Beaches.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 388–390.

Rough flint Celts of the Co. Antrim.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 505, 506.

Stone Celts found near Belfast.—*Journal R.H.A.A.I.*, vol. ii., 4th series, p. 138.

The Flint Flake Foundation of the pre-Adamite Theory.—*Belfast Nat. Field Club*, 1866, pp. 44–48.

The rudely-worked flints of Antrim and Down.—*Proc. Belfast Nat. Field Club*, new series, vol. i., pp. 108–113.

Worked flints, Ancient and Modern.—*Belfast Nat. Field Club*, series ii., vol. iii., pp. 545, 548.

174 **Knowles, W. J., M.R.I.A.:**

Flint arrow-head with portion of shaft and ligature of sinew, &c.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 126–128.

Flint flakes in the Ballyrudder Gravels.—*Belfast Nat. Field Club*, series ii., vol. iii., pp. 410–414.

Flint Implements of the N.E. of Ireland.—*Proc. R.I.A.* (3rd series), vol. i., pp. 188, 189.

Flints from the raised Beach at Larne, &c.—*Proc. Belfast Nat. Field Club* (series ii.), vol. ii., pp. 539 542.

Irish Flint Saws.—*Journal R.S.A. Ireland*, vol. iv., 5th series, pp. 341–348.

Stone axes and chisels.—*Journal R.S.A.I.*, vol. iii., 5th series, pp. 140–163.

Tracked stones.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 497–502.

Worked flints.—*British Association Meeting*, Belfast, 1874, Dublin, 1878, Sheffield, 1879.

175 **Long, J., C.E.:**

On the age of the various stone antiquities found during the Shannon Navigation operations.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 264–267.

176 **MacAdam, Robert:**

Stone battle-axe.—*Ulster Journal of Archaeology*, vol. iii., pp. 234, 235.

177 **O'Laverty, Rev. James:**
Relative antiquity of Stone and Bronze weapons. — *Ulster Journal of Archaeology*, vol. v., pp. 122–127.

178 **Patterson, W. H., M.R.I.A.:**
Flint implements found at Ballymisert, Co. Down.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1880, pp. 165, 166.
Site for worked flints.—*Journal R.S.A.I.*, vol. ii., 5th series, pp. 154, 155.

179 **Raphael, George:**
Arrangement of collections of arrow-heads. — *Journal R.H.A.A.I.*, vol. vii., 4th series, p. 663.

180 **Simpson, W. J.:**
Worked flints found on a raised Beach.—*Proc. R.I.A.* (3rd series), vol. i., pp. 76, 77.

181 **Tenison, Thomas J.:**
On stone Celts.—*Journal Kil. A. Society*, vol ii., new series, pp. 446–448.

182 **Wakeman, W. F.:**
Antiquities discovered in the Co. Cavan.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 183–200.
Flint Knife.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 258–261.
Stone Celts as found in Ireland.—*Proc. R.S.A.I.*, vol. i., 5th series pp. 155–157.

183 **Writers, Various:**
Geological Survey Memoirs.

X.—*FORGERIES, &c.*—(CHAPS. I., II., AND XIII.)

184 **Anomymous:**
Flint Jack.—*All the Year Round*, vol. xvii., pp. 259–264.

185 **Benn, E.:**
Stone antiques.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 205–207.

186 **Ferguson, Samuel, LL.D., &c.:**
Inscribed Stone on Callan mountain.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 160–171.

187 **Flanagan, Theopilus:**
See OGHAM.—O'Flanagan.

188 **Graves, Rev. James:**
Supposed inscription on Tory Hill.—*Trans. Kil. A. Society*, vol i., pp. 300–304.

189 **Gray, William:**
Counterfeit bronze sword. — *Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 122, 123.
Flint Jack and his work.—*Belfast Nat. Field Club*, 1873, pp. 51–53.

190 **Knowles, W. J., M.R.I.A.:**
Counterfeit antiquities.—*Journal R.H.A.A.I.*, vol vii., 4th series, pp. 430, 431.

191 **Tighe, W.:**
Inscription in the Co. Kilkenny —*Archaeologia*, vol. xvii., pp. 118–123.

XI.—*FOSSIL MAMMALIA.*—(CHAP. I.)

A Bibliography on this subject has been compiled by V. BALL, C.B., LL.D., and appears in the *Scientific Transactions of the Royal Dublin Society*, vol. iii. (series ii.), pp. 345–348, and is here reproduced by permission of the author. In the following references, the first date in parenthesis is that of the Paper; the second, that of the volume in which it appears.

192 **Adams, A. Leith, M.D., F.R.S.:**

Alpine Hare, Bear, Wolf, Dog, Fox, Horse, Sheep and Goat, Red Deer, Reindeer, Mammoth: *Transactions of the Royal Irish Academy* (1876), vol. xxvi., pt. v., p. 187.

Journal Royal Geological Society of Ireland (1877), (1877), vol. xiv., (N.S., iv.), p. 246.

Proceedings of the Royal Dublin Society (1878), (1878), vol. ii., (N.S.), pp. 45, 86, pl. i.–iv.

Bear, Irish Elk: *Journal Royal Geological Society of Ireland* (1879), (1879), vol. xv. (N.S., v.), p. 170.

Alpine Hare, Bear, Wolf, Dog, Fox, Horse, Cattle, Red Deer, Irish Elk, Wild Boar: *Scientific Transactions of the Royal Dublin Society* (1881), vol. i., ser. ii., p. 177.

193 **Anonymous:**

Dog: *Irish Penny Journal* (1841), vol. i., p. 353.

194 **Bailey, William H., F.G.S.:**

Irish Elk, Reindeer: *Journal of the Royal Geological Society of Ireland* (1878), 1878), vol. xv. (N.S., v.), p. 97.

195 **Ball, R., LL.D.:**

Cattle: *Proceedings of the Royal Irish Academy* (1839), vol. i., p. 253.

Idem. (1844), vol. ii., p. 541.

Cattle: *Journal of the Geological Society of Dublin* (1844), (1844), vol. iii., p. 50.

Bear: *Proceedings of the Royal Irish Academy* (1849), (1849), vol. iv., pp. 214 and 416–420.

Bear: *Annals of Natural History* (1850), vol. v., p. 234. (Reprint of previous Paper.)

196 **Blythe, E.:**

Bear: *Journal of the Geological Society of Dublin* (1864), (1864), vol. x., p. 173.

Sheep and Goats, Cattle, Irish Elk: *Proceedings of the Royal Irish Academy* (1864), vol. viii., p. 472.

197 **Boyd-Dawkins, Prof. W., F.R.S.:**

Early Man in Britain (1880), p. 257, &c.

198 **Brenan, E.:**

Alpine Hare, Bear, Horse, Reindeer, Mammoth: *Journal of the Royal Dublin Society* (1859), (1859), vol. ii., pp. 344–350, pls. x.–xii.

Alpine Hare, Bear, Horse, Reindeer, Mammoth: *Natural History Review, Dublin* (1859), vol. vi., pp. 494–500. (Reprint of previous Paper.)

199 **Bryce, Dr. James:**

Horse, Sheep and Goat, Cattle, Red Deer: *British Association Reports* (1834), p. 658. (Ballintoy Caves.)

200 **Carte, A., M.D.:**

Alpine Hare, Bear, Horse, Reindeer, Mammoth: *Journal of the Royal Dublin Society* (1859), vol. ii., pp. 351–357, pls. x.–xiii.

Reindeer: *Journal of the Geological Society of Dublin* (1863), (1864), vol. x., pp. 103–107, and p. 106, pl. vii.

Bear: *Idem.*, pp. 114–119, and 173–4.

Irish Elk: *Journal of the Royal Geological Society of Ireland* (1866), (1866), vol. xi., p. 151.

201 **Close, Rev. M. H., M.A., F.G.S.:**

Irish Elk, Reindeer: *Journal of the Royal Geological Society of Ireland* (1878), vol. xv. (N.S. v.), p. 74.

202 **Denny, Henry:**

Irish Elk: *Proceedings of the Geological and Polytech. Society, W. Riding of Yorkshire* (1855), (1849–50), vol iii., pp. 400–430.

Bear: *Idem.* (1864), (1864–69), vol. iv., pp. 338–358. (Figures of bears' skulls.)

203 **Du Noyer, G. V.:**

Irish Elk: *Journal of the Royal Geological Society of Ireland* (1866), (1867), vol. xi. (N. S., vol. i.), pp. 247–248.

204 **Genitz, Prof. H. B.:**

Irish Elk: *Journal of the Geological Society of Dublin* (1863), (1863), vol. ix., p. 338.

205 **Glennon, R.:**

Irish Elk: *Zoologist* (1847), vol v., p. 1589. ('Lough Gur.')

206 **Going, W. Q.:**

Bear, Irish Elk: Expl. to sheet No. 133 of Map of Geological Survey of Ireland (1862), p. 34.

207 **Harkness, Prof.:**

Mammoth: *Geological Magazine* (1870), vol. vii., p. 253.

208 **Hart, Dr. John:**

Irish Elk: *Proceedings of the Royal Dublin Society* (1824), vol. ix., p. 238.

Irish Elk: 'On the Skeleton of the Fossil Deer of Ireland.' Dublin (1830), pp. 1–36, pls. i., ii.

Journal of the Geological Society of Dublin (1833), 1838), vol. i., pp. 20–23.

209 **Haughton, Rev. S., M.D., F.R.S.:**

Irish Elk: *Journal of the Geological Society of Dublin* (1801), (1802), vol. ix., p. 340.

Red Deer: *Idem.* (1863), (1864), vol. x., pp. 125–127.

210 **Hibbert, S., M.D.:**

Irish Elk: *Edinburgh Journal of Science* (1825), vol. iii., pp. 15 and 129. ('Irish Elk in Isle of Man.')

Irish Elk: *Idem.*, N. S. (1830), vol. ii., p. 306. 'Historical Notices of Irish Elk.')

211 **Hull, Prof. E., F.R.S.:**

Journal of the Geological Society of Ireland (1875), (1875), vol. xiv. (N. S., iv.), pp. 40–53.

Physical Geology of Ireland (1878), pp. 267–272.

212 **Jukes, Prof. J. B., F.R.S.:**
Irish Elk: *Journal of the Geological Society of Dublin* (1863), (1864), vol. x., pp. 127–137, and pp. 108–171.

213 **Kinahan, G. H., M.R.I.A.:**
Geology of Ireland (1878), p. 293.
Irish Elk: *Scientific Transactions of the Royal Dublin Society* (1880), (1881), vol. i., ser. ii., p. 177.
Irish Elk: *Transactions of the Edinburgh Geological Society* (1883), vol. xvii.

214 **Knowles, W. J.:**
Dog, Horse, Cattle, Red Deer, Wild Boar: *Journal of the Anthrop. Institute* (1877), vol. vii., p. 202. ('Ballintoy.')

215 **Lentaigne, Sir J., M.D.:**
Irish Elk: *Journal of the Geological Society of Dublin* (1863), (1864), vol. x., p. 168.

216 **Molyneux, Thomas, M.D.:**
Irish Elk: *Philosophical Transactions*, (1697), vol. xix., pp. 489–512. Pl. of the 'Irish Elk.'
Mammoth: *Philosophical Transations* (1717), vol. xxix., p. 370. Pl. of mammoth teeth.
[Both the above are reprinted in (Boates') *Natural History of Ireland* (1755).]

217 **Maunsell, Archdeacon:**
Irish Elk: *Proceedings of the Royal Dublin Society* (1842), vol. lx., pp. 169 and 211; *idem.* (1825), vol. lxi., p. 93.
Irish Elk: *Annals of Philosophy* (1826), vol. ix., pp. 305–312.
Irish Elk: *Froriep Notizen* (1826), vol. xiv., col. 305–307.

218 **Moss, R. J., F.C.C.:**
Irish Elk, Reindeer: *Proceedings of the Royal Irish Academy* (1876), (1876), vol. ii., sec. 2, p. 547.

219 **Nevil, Francis:**
Mammoth: (Boates') *Natural History of Ireland*, Dublin (1715), (1755), p. 128.

220 **Oldham, T., LL.D., F.R.S.:**
Irish Elk: *Journal of the Geological Society of Dublin* (1844), (1844), vol. iii., p. 70.
Red Deer, Irish Elk: *Idem.* (1847), (1847), vol. iii., pt. iv., pp. 252–253.

221 **Oswald, H. R.:**
Edinburgh Journal of Science (1825), vol. iii., pp. 28–31. ('Fossil Elk of Isle of Man.')

222 **Owen, Sir R., F.R.S.:**
Bear: *Proceedings of the Royal Irish Academy* (1849), vol. iv., pp. 418–420 (a letter to R. Ball), ('Bears' Skulls').
Irish Elk: *Zoologist* (1847), p. 1620 (*Megaceros*).

223 **Richardson, H M.:**
Irish Elk: *Zoologist* (1847), pp. 1623 and 1685.
Irish Elk: *The Irish Giant Deer.* M'Glashan, Dublin (1846).

224 **Scott, R. H., F.R.S.:**

Journal of the Geological Society of Dublin (1864), (1864), vol. x., p. 143.
(Reprint of previous Paper.) *Geological Magazine* (1870), vol. vii., pp. 413–420.

225 **Scouler, Dr. John:**

Irish Elk: *Journal of the Geological Society of Dublin* (1836), (1838), vol. i., p. 197–210.
Dog, Irish Elk: *Idem.*, p. 224–231.
Irish Elk: *Idem.* (1844), vol. iii., p. 15.

226 **Smith, Charles, M.D.:**

Dog: *Ancient and Present State of the County and City of Waterford* (1741), p. 58, pt. iv., fig. ii., mammoth's rib.
Wolf, Irish Elk: *History of the County of Kerry* (1756), p. 173.

227 **Thompson William:**

Proceedings of the Zoological Society of London (1837), pt. v., p. 53.
Cattle, Red Deer, Wild Boar: *Report of the British Association* (1840), p. 362.

228 **Ussher, R. J.:**

Cattle, Irish Elk, Wild Boar: *Journal of the Royal Geological Society of Ireland* (1879), (1879), vol. xv. (N. S. v.), p. 170.
Cattle, Irish Elk, Wild Boar: *Scientific Transactions of the Royal Dublin Society* (1880), (1881), vol. i., ser. ii., p. 177.

229 **Weaver, Thomas, M.R.I.A.:**

Irish Elk: *Annals of Philosophy*, London (1825), vol. ix., p. 463. ('Fossil Elk in Co. Down.')

230 **Wilde, Sir W. R., M.R.I.A.:**

Dog, Sheep and Goat, Cattle, Wild Boar: *Proceedings of the Royal Irish Academy* (1840), 1840), vol. i., pp. 420–426.
Cattle, Wild Boar: *Idem.* (1858), (1861), vol. vii., pp. 64–75.
Bear, Wolf, Dog, Sheep and Goat, Cattle, Red Deer, Irish Elk: *Idem.* (1859), (1861), vol. vii, pp. 181–212.
Dog: *Natural History Review* (1858), vol. v., p. 276–287.

231 **Williams, William:**

Irish Elk: *Scientific Proceedings of the Royal Dublin Society* (1878), vol. ii., pt. 1, p. 105.
Irish Elk: *Geological Magazine* (1881), N.S., vol. vii., p. 354.

A few papers and notices not above mentioned are appended.

232 **Anonymous:**

Irish Wolf Dog.—*Dublin Penny Journal*, vol. i., pp. 9, 10, 408.

233 **Benn, Edward:**

Contemporary existence of man and the Cer. Meg. Hib.—*Journal Kil. A. Society*, vol. i., new series, pp. 155–159.

234 **Cane, Robert, M.D., &c.:**

Irish fossil deer.—*Trans. Kil. A. Society*.—vol. i., pp. 164–167.

235 **Cody, Patrick:**

Head of Cer. Meg. Hib.—*Trans. Kil. A. Society*, vol. i., p. 388.

236 **Graves, Rev. James:**

Sawn fragments of deers' horn.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 434, 435.

237 **Haughton, Professor, M.D., F.R.S.; Macalister, Professor, M.D., and Plunkett, T.:**

Exploration of the Knockninny Cave, with an account of the animal remains.—*Proc. R.I.A.* (2nd series), vol. ii., pp. 465–483.

238 **Hewson, G. J.:**

Finds of Elk Heads, &c.—*Journal R.S.A.I.*, vol i., 5th series, pp. 485–488.

239 **O'Keeffe, C. M.:**

Horses and Hounds of Ancient Ireland.—*Ulster Journal of Archaeology*, vol. vii., pp. 65–71.

240 **O'Reilly, Professor J. P.:**

History of the Irish Wolf Dog.—*Proc. R.I.A.* (3rd series), vol. i., pp. 333–339.

241 **Phayer, J. R.:**

The Irish Elk.—*Trans. Kil. A. Society*, vol. i., p. 33.

242 **Prim, Mr.:**

Discovery of antlers of the Cer. Meg. Hib.—*Journal Kil. A. Society*, vol. v., new series, p. 330.

243 **Praeger, R. Lloyd:**

Skull of Irish Elk.—*Belfast Nat. Field Club*, series ii., vol. iii., pp. 416, 417.

244 **Scharff, R. F., Ph. D., B. Sc.:**

Origin of the Land and Freshwater Fauna of Ireland.—*Proc. R.I.A.*, vol. iii., 3rd series, pp. 479–485.

245 **Thompson, William:**

The Irish Hare.—*Proc. R.I.A.*, vol. i., pp. 177, 178.

246 **Young, R. M., B.A., M.R.I.A.:**

On a recent find of Irish Elk bones, &c., in Belfast.—*The Irish Naturalist*, vol iii., pp. 81, 82.

XII.—*GLASS.*—(CHAP. XII.)

247 **Atkinson, George M.:**

Glass Beads.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 69–71.

248 **Ball, V., C.B., LL.D., &c.:**

On a block of Glass Enamel.—*Trans. R.I.A.*, vol. xxx., pp. 277–293.

249 **Benn, Edward:**

Ancient Glass beads.—*Proc. Historic. S. of Lan. and Cheshire*, vol. viii.

250 **Day, Robert, jun., F.S.A.:**

Ornaments of Glass.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 335–338.
Ornaments in Glass.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 112–114.

251 **Ffrench, Rev. J. F. M.:**
Ancient Glass manufactory.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 420–423.

252 **Fowler, James, F.S.A.:**
On the Process of Decay in Glass, &c.—*Archaeologia*, vol. xlvi., pp. 65–102.

253 **Hassé, Rev. Leonard, M.R.I.A.:**
Glass Beads.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 359–366.
Irish Beads.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 382–391.

254 **Knowles, W. J.:**
Beads and Amulets.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 522–537.

255 **Nesbitt, Alexander, F.S.A.:**
Probable origin of beads of Glass.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 592–596.

256 **O'Byrne, Daniel:**
Glass bead.—*Journal Kil. A. Society*, vol. ii., new series, p. 8.

257 **Patterson, W. H.:**
Benn Collection, Belfast Mus.—*Journal R.H.A.A.I.*, vol. v., 4th series, p. 296.

258 **Wilde, Sir W. R., M.R.I.A.:**
Catalogue Museum R. I. A., pp. 162–169.

259 **Wood-Martin, Col. W. G., M.R.I.A.:**
Lake Dwellings of Ireland, pp. 122–125.

XIII.—*GOLD.*—(CHAP. XI.)

260 **Anonymous:**
Ancient gold balls.—*Dublin Penny Journal*, vol. iii., p. 144.
Antique ornaments of gold found in the County Clare.—*Ulster Journal of Archaeology*, vol. iv., pp. 147–153.
Druid's Altar.—*Dublin Penny Journal*, vol. i., p. 209.
The Wicklow gold mines.—*Dublin Penny Journal*, vol i., pp. 115–116.

261 **Ball, Robert, LL.D.:**
The dying gladiator.—*Proc. R.I.A.*, vol. vi., pp. 152–154.
The original use of certain golden ornaments and other articles in the Museum R. I. A —*Proc. R.I.A.*, vol. iii., pp. 25–27.

262 **Betham, Sir William, M.R.I.A.:**
Modern and ancient ring money.—*Proc. R.I.A.*, vol. i., p. 20.
The ring money of the Celtae.—*Trans. R.I.A.*, vol. xvii., pp. 7–20, 91–98.

263 **Birch, Samuel:**
The Torque of the Celts.—*The Archaeological Journal*, vol. iii., pp. 27–38.

264 **Brash, Richard Rolt, M.R.I.A.:**
The precious metals and ancient mining in Ireland.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 509–534.

265 **Cane, Robert, M.D.:**

The ring money of ancient Ireland.—*Trans. Kil. A. Society*, vol. i., pp. 322–328.

266 **Clibborn, Edward:**

Historical arguments on the origin of the Irish gold antiquities.—*Ulster Journal of Archaeology*, vol. viii., pp. 88–98.

Gold ornaments lately found near Naas.—*Proc. R.I.A.*, vol iii., p. 99.

The gold antiquities found in Ireland.—*Ulster Journal of Archaeology*, vol. viii., pp. 36–54.

267 **Conyngham, Lord Albert, F.S.A.:**

Description of some gold ornaments recently found in Ireland.—*Archaeologia*, vol. xxx., p. 137.

268 **Croker, T. Crofton, F.S.A.:**

Collectanea Antiqua, vol. iii., pp. 131–152, 221–250.

269 **Day, Robert, M.R.I.A.** (and Others):

Gold torques.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 7, 8.

A recent important find of gold torques in Co. Donegal.—*Journal R.H.A.A.I.*, vol. vi , 4th series, pp. 182–185.

270 **Dugan, C. Winston, M.A.:**

The gold antiquities of Ireland.—*Belfast Nat. Field Club* (series ii.), vol. iii., p. 304.

271 **Graves, Rev. Charles:**

An antique gold ornament.—*Proc. R.I.A.*, vol. iii., pp. 460–463.

272 **Graves, Rev. James:**

The extraordinary discovery of gold ornaments in the Co. Clare.—*Trans. Kil. A. Society*, vol. iii., pp. 181, 182.

273 **Gray, William:**

A gold torque discovered near Bushmills, Co. Antrim.—*Journal R.H.A.A.I.*, vol. ii., 4th series, p. 138.

274 **Greaves, J. H.:**

Unique specimen of gold ring 'money' found in the Co. Waterford.—*Journal Kil. A. Society*, vol. i., new series, pp. 254, 255.

275 **Hitchcock, Richard:**

The discovery of a curious gold ornament near Omagh.—*Journal Kil. A. Society*, vol i., new series, p. 79.

276 **Hoare, Capt. Edward:**

Ancient Celto-Irish unique collar of gold.—*Journal Kil. A. Society*, vol i., new series, pp. 360–362.

A penannular gold ring.—*Journal Kil. A. Society*, vol. i., new series, pp. 391–392.

A penannular ring of gold.—*Journal Kil. A. Society*, vol. i., new series, pp. 320–321.

277 **M'Naughton, John Alexander:**

An account of a golden rod found by a peasant in the neighbourhood of Ballycastle, Co. Antrim.—*Archaeologia*, vol. xvi., p. 353.

278 **Madden, R. R.:**

Gold rings found at Strokestown.—*Proc. R.I.A.*, vol. iv., p. 389.

279 **Molesworth, William:**

Concerning some golden antique instruments found in a bog, Co. Armagh.—*Trans. R.I.A.*, vol. iv., pp. 37–39.

280 **O'Connell, Maurice:**

An account of certain antiquities presented to the Academy.—*Proc. R.I.A.*, vol. iv., pp. 166, 167.

281 **Ousley, Ralph, M.R.I.A.:**

Account of four circular plates of gold found in Ireland.—*Trans. R.I.A.*, vol. vi., pp. 31–35.

282 **Petrie, George, LL.D.:**

Gold torques found near Tara Hill: Plates of gold found in Ireland.—*Dublin Penny Journal*, vol. i., pp. 156, 244.

Gold rings found at Strokestown.—*Proc. R.I.A.*, vol. iv., p. 389.

Two gold torques found at Tara.—*Proc. R.I.A.*, vol. i., pp. 274–270.

283 **Plummer, Rev. R.:**

The discovery of three gold fibulæ, a gold bracelet, and a bronze celt.—*Proc. R.S.A.I.*, vol. i., 5th series, p. 343.

284 **Pococke, Right Rev. Richard** (late Lord Bishop of Meath):

An account of some antiquities found in Ireland.—*Archæologia*, vol. ii., pp. 32–41.

285 **Pownall, Governor:**

Account of some Irish Antiquities.—*Archæologia*, vol. iii., pp. 355–370.

286 **Pownall, Thomas:**

Further observations on early Irish antiquities.—*Archæologia*, vol. vii., pp. 164–169.

287 **Robertson, J. G.:**

A gold ornament found at Claragh, Co. Kilkenny.—*Journal R.H.A.A.I.*, vol iii., 4th series, pp. 480, 481.

288 **Way, Albert:**

Gold armillæ and rings.—*The Archæological Journal*, vol. vi., pp. 48–100.

289 **Welsh, Alexander Colville:**

An ornament made of gold and bronze, or an early attempt at counterfeiting.—*Journal Kil. A. Society*, vol. ii., new series, pp. 95, 96.

290 **Wilde, Sir W. R., M.R.I.A.:**

A descriptive catalogue of the antiquities of gold in the Museum, Royal Irish Academy.—Dublin, 1862, pp. 1–100.

Gold antiquities found in Ireland prior to 1747.—*Proc. R.I.A.*, vol. viii., pp. 82–86.

The destruction of a splendid gold fibula.—*Journal Kil. A. Society*, vol. ii., new series, p. 445.

The gold antiquities recently added to the Museum.—*Proc. R.I.A.*, vol. viii., pp. 406–409.

291 **Windele, John:**

Ancient Irish gold.—*Ulster Journal of Archæology*, vol. ix., pp. 28–50.

Ancient Irish gold and its origin.—*Ulster Journal of Archæology*, vol. ix., pp. 197–222.

The ring money of ancient Ireland.—*Trans. Kil. A. Society*, vol. i., pp. 328–333.

XIV.—*HUMAN CRANIA, OSSEOUS REMAINS, &c.*

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In the *Ulster Journal of Archaeology* may be found much relative to the crania of Early Christian times; but this subject having little, if any, bearing on pagan times, has not been Catalogued.

292 **Brown, Charles R., M.D., &c.:**

Ethnography of Inishbofin, &c.—*Proc. R.I.A.* (3rd series), vol. iii., pp. 317–370.

On some Crania.—*Proc. R.I.A.*, 3rd series, vol. ii., pp. 649–654.

293 **Cunningham, D. J., M.D., F.R.S.; and Brown, C. R., M.D.:**

Osseous Remains found at Old Connaught, Bray, Co. Dublin.—*Proc. R.I.A.*, vol. iii., 3rd series, pp. 421–427.

294 **Davies, J. Barnard:**

Irish Ethnology.—*Ulster Journal of Archaeology*, vol. viii., pp. 145–148.

295 **Editor Ulster Journal of Archæology:**

Sepulchral Chamber.—*Ulster Journal of Archaeology*, vol. iii., pp. 358–365.

296 **Frazer, W., F.R.C.S.I.:**

Irish antropology.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 391–404.

Irish crania.—*Proc. R.I.A.* (3rd series), vol. ii., pp. 643–647.

297 **Geoghegan, Arthur Gerald:**

Human crania.—*Journal Kil. A. Society*, vol. iv., new series, pp. 343–345.

298 **Grattan, John:**

Examination of a Sepulchral mound.—*Ulster Journal of Archaeology*, vol. i., pp. 274–285.

Human remains.—*Ulster Journal of Archaeology*, vol. vi., pp. 221–246.

On measuring human crania.—*Ulster Journal of Archaeology*, vol. i., pp. 198–208.

Skulls, and casts of skulls from various Irish sources.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1873–4, pp. 121–126.

299 **Haddon, Professor A. C., &c.:**

Ethnography of the Aran Island.—*Proc. R.I.A.*, 3rd series, vol. ii., pp. 768–830.

Irish Craniology.—*Proc. R.I.A.* (3rd series), vol. ii., pp. 759–767.

Irish Craniology.—*Proc. R.I.A.* (3rd series), vol. iii., pp. 311–316.

300 **Kinchella, Mr.:**

Stone axe found embedded in a human skull.—*Journal R.H.A.A.I.*, vol. ii., 4th series, p. 255.

301 **Lalor, M. W.:**

Discovery of human remains.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 446, 447.

302 **Lawlor, J.:**

Discovery of a skeleton.—*Journal Kil. A. Society*, vol. vi., new series, pp. 7, 8.

303 **Lentaigne, J., M.D.:**
On some portions of a skeleton.—*Proc. R.I.A.*, vol. iv., pp. 187, 188.

304 **Long, J., C.E.:**
On the antiquity of man in Ireland.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 264–267.

305 **Lynch, P. J.:**
Human remains.—*Journal R.S.A.I.*, vol. ii., 5th series, pp. 80–82.

306 **M'Cormack, James, C.E.:**
Discovery of human Skeletons.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 447–449.

307 **Reade, Rev. George H.:**
On human osseous remains.—*Trans. Kil. A. Society*, vol. iii., p. 277.

308 **Searanke, J. S.:**
On certain antiquities, &c.—*Proc. R.I.A.*, vol. iv., pp. 388, 389.

309 **Smith, J. Richardson:**
Explorations in a pagan cemetery, discovery of a decapitated skeleton.—*Trans. Kil. A. Society*, vol. iii., pp. 374, 375.

310 **White, Rev. P.:**
Human remains found in a cist, also in a carn.—*Journal R.H.A.A.I.*, vol. iii., 4th series, p. 240.

311 **Wilde, Sir W. R., M.R.I.A.:**
Beauties of the Boyne and Blackwater.—Dublin, 1849: pp. 40, 41, 212–240.
On human remains.—*Proc. R.I.A.*, vol. vii., pp. 89–91.

312 **Writers (Various):**
Human interments.—*Trans. Kil. A. Society*, vol. i., pp. 26–29.

XV.—*JADE.*—(CHAP. IX.)

313 **Mac Ilwaine, Rev. Canon:**
Jade axe discovered in the Co. Antrim.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 316–323.

314 **Kinahan, G. H.:**
Geology of Ireland.

XVI.—*JET.*—(CHAP. XII.)

315 **Atkinson, George M.:**
Jet ornaments.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 69–71.

316 **Ball, V., C.B.:**
An account of Mediæval Ireland.—*The Irish Naturalist*, vol. iii., pp. 74–76.

317 **Frazer, W., F.R.C.S.I.:**
Jet beads.—*Proc. R.S.A.I.*, vol. ii., 5th series, pp. 221–223.

318 **Wilde, Sir W. R., M.R.I.A.:**
'Catalogue' Museum R. I. A., pp. 240–242.

XVII.—*KITCHEN MIDDENS OR REFUSE HEAPS AND OPEN-AIR COOKING PLACES.*—(CHAP. VI.)

319 **Anonymous:**

Open-air Cooking places.—*Ulster Journal of Archaeology*, vol. vi., pp. 101, 185.

320 **Atkinson, George M.:**

Kitchen Middens.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 258–201.

321 **Hackett, William:**

Ancient Cooking places.—*Trans. Kil. A. Society*, vol. iii., pp. 59–61.

322 **Kinahan, G. H., M.R.I.A.:**

Some unrecorded antiquities.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 10–13.

323 **Lymberry, Rev. John:**

Kitchen Middens on Clare Island.—*Journal Kil. A. Society*, vol. v., new series, pp. 121, 122, 181, 182.

324 **Malcomson, Robert:**

Kitchen Midden near Ardnahue.—*Journal Kil. A. Society*, vol. v., new series, pp. 117–121, 182, 373.

325 **Martin, James, M.D.:**

Ancient Cooking places.—*Journal R.H.A.A.I.*, vol. ix., 4th series, p. 142.

326 **Prim, John G. A.:**

Antiquities discovered in trenching a small rath.—*Journal Kil. A. Society*, vol. iii., new series, pp. 307, 308.

Excavation of a rath.—*Trans. Kil. A. Society*, vol. ii., pp. 119–127.

327 **Quinlan, John:**

Cooking places of the Stone Age.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 390–392.

328 **Robertson, James G.:**

Primitive Cooking place.—*Journal R.H.A.A.I.*, vol. iii., 4th series, p. 153.

329 **Ussher, R. J.:**

Objects found in the Kitchen Middens of Raths.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 362–368.

330 **Writers (Various):**

Ancient Cooking places.—*Townsend's Survey of the Co. Cork*, vol. i., p. 145; *Ulster Journal of Archaeology*, vol. vi., pp. 101, 185; *Trans. Kil. A. Society*, vol. iii., pp. 57, 58; *Journal R.H.A.A.I.*, vol. vii., pp. 663, 664; *Keating, G., History of Ireland.*

XVIII.—*LAKE DWELLINGS.*—(CHAP. VI.)

331 **Anonymous:**

Account of an attack on a crannog in the year 1500 (extracted by Dr. CAULFIELD, from a MS. in the Public Record Office).—*Journal R.H.A.A.I.*, vol. viii., 4th series, p. 344.

Lake Habitations of Switzerland and Ireland.—*Ulster Journal of Archaeology*, vol. vii., pp. 170–104.

332 **Ball, Robert, LL.D.; Enniskillen, Earl of: Kelly, Denis H.; Petrie, George, LL.D.:**

(i.) Antiquities discovered in the Lake of Cloonfree, Co. Roscommon. (ii.) Discovery of Bones of the Fossil Elk. (iii.) On Crannog Islands. —*Proc. R.I.A.*, vol. v., p. 214, 215.

333 **Benn, Edward:**

Observations on Irish Crannogs.—*Journal Kil. A. Society*, vol. iii., new series, pp. 86–90.

On some antiques found in crannogs.—*Journal Kil. A. Society*, vol. iv., new series, pp. 36–38.

On some objects of antiquity found in the Parish of Loughguile, Co. Antrim.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 20–22.

334 **Buick, Rev. G. R., LL.D., M.R.I.A.:**

Crannog of Moylarg.—*Journal R.S.A. Ireland*, vol. iii., 5th series, pp. 27–43.

Second notice.—*Journal R.S.A. Ireland*, vol. iv., 5th series, pp. 315–331.

335 **Crowe, J. O'Beirne:**

Etymology of the word 'crannog.'—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 221–223.

336 **Day, Robert, jun.:**

Flint implements found on Toome Bar, Lough Neagh, on supposed crannog sites.—*Journal Kil. A. Society*, vol. v., new series, pp. 227, 228.

337 **Dunne, Right Hon. General:**

Crannog in Lough Annagh.—*Journal R.H.A.A.I.*, vol., i., 3rd series, pp. 154–156.

338 **Enniskillen, Earl of.** *See* BALL.

339 **Fitzpatrick, Bernard:**

Crannog in Grantstown Lake, Queen's County.—*Journal Kil. A. Society*, vol. viii., new series, pp. 228, 229.

340 **Graves, Rev. James:**

Stone and bone antiquities found at a crannog in Ballinderry Lough, Co. Westmeath.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 106–202.

Trouvaille from the crannog of Lisnacroghera, near Broughshane, Co. Antrim.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 375–408.

341 **Gray, William:**

Crannog canoe from Lough Mourne, Co. Antrim.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 371, 372.

342 **Hall, Mr. & Mrs. J. C.:**

Ireland: its Scenery, &c., vol. iii., p. 259.

343 **Harkness, Professor B.:**

Crannog, Drumkeery Lough, Co. Cavan.—*Archaeologia*, vol. xxxix., pp. 433–440.

344 **Hore, Herbert F.:**

The Earl of Essex's Enterprise for the recovery of Ulster.—*Ulster Journal of Archaeology*, vol. ix., p. 251.

345 **Kane, W. de V.:**
Notes on Crannogs in Leitrim.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 407–409.

346 **Keller, Ferdinand:**
The Lake Dwellings of Switzerland, &c.—London, 1878.

347 **Kelly, Denis H.:**
Antiquities discovered in the Lake of Cloonfree, Co. Roscommon.—*Proc. R.I.A.*, vol. v., pp. 208–214.

348 **Kilbride, Rev. W.:**
Etymology of the word 'crannog.'—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 219–222.

349 **Kinahan, G. Henry, F.R.G.S.I., M.R.I.A.:**
Crannog in Lough Nahinch.—*Proc. R.I.A.*, vol. ix., pp. 176–179.
Crannog in Lough Naneevin.—*Proc. R.I.A.*, vol. x., pp. 31–33.
Crannogs in Ballin Lough.—*Proc. R.I.A.*, vol. ix., pp. 172–176.
Crannogs in Loughrea.—*Proc. R.I.A.*, vol. viii., pp. 412–427.
Geology of Ireland.
Observations on the exploration of Crannogs.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 459–461.
Unrecorded antiquities in Iar Connaught.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 10–13.

350 **Kirker, S. K.:**
Cloughoughter Castle, Co. Cavan.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 294–297.

351 **Lett, Rev. H. W., M.A.:**
Ancient Canoe, found at Lisnagonnell.—*Ulster Journal of Archæology* (New Series), pp. 233, 234.

352 **Lewis' Topographical Dictionary:**
Wooden House in Lough Annagh, vol. ii., p. 175.

353 **Lockwood, W. J.:**
Examination of crannogs in Lough Mourne, near Carrickfergus.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 194, 195.

354 **Lockwood, F. W.:**
Examination of crannogs, Lough Mourne.—*Proc. Belfast Nat. Field Club* (series ii.), vol., ii., pp. 170–174.
On the crannogs of Lough Mourne.—*Journal R.H.A.A.I.*, vol. vi., 4th series, p. 177.

355 **Milligan, Seaton F.:**
On crannogs in the Co. Cavan.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 148–152.

356 **Morant, George, jun.:**
Ancient floor, Cargaghoge, Barony of Farney.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 269, 270.
Crannog in Monalty Lake.—*Journal Kil. A. Society*, vol. iv., new series, p. 379.
Crannogs in the lake of Ballyhoe.—*Journal Kil. A. Society*, vol. vi., new series, pp. 8–10.

357 **Mudge, Capt. William, R.N.:**

Ancient structure dug out of Drumkelin Bog, Parish of Inver, Co. Donegal.—*Archæologia*, vol. xxvi., pp. 361–367; also, *Dublin Penny Journal*, 1836, pp. 381–383.

358 **Mulvany, T. J.:**

Artificial Stockaded Islands in Leitrim, Cavan, and Monaghan.—*Proc. R.I.A.*, vol. v., p. 43.

359 **Munroe, Robert:**

The Lake Dwellings of Europe.—Cassell and Co., pp. 600.

Lake Dwellings in Lough Mourne, Co. Antrim.—*Proc. S. A.* (Scotland), vol. xx., pp. 321–330.

The Structural Features of Lake-dwellings.—*Journal R.S.A. Ireland*, vol iv., 5th series, pp. 105–114.

Second notice, pp. 209–221.

360 **O'Callaghan, C. G.:**

Crannogs in Lough Bridgid, Co. Clare.—*Proc. R.S.A. Ireland*, vol. i., 5th series, p. 487.

361 **Patterson, W. H.:**

Silver brooch found at the Crannog of Aghaloughan, Co. Antrim.—*Journal R.H.A.A.I.*, vol. ii., 4th series, p. 74.

362 **Petrie, George, LL.D.:**

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363 **Plunkett, T.:**

Ancient structure, found in peat, near Boho, Co. Fermanagh.—*Proc. R.I.A.*, vol. ii., 2nd series, p. 66.

364 **Reade, Rev. George H.:**

Discovery of a crannog, parish of Aghnamullen, Co. Monaghan.—*Journal Kil. A. Society*, vol. v., new series, p. 229 (correction) p. 334.

365 **Reeves, Rev. W., D.D.:**

Crannog of Inishrush and its ancient occupants.—*Proc. R.I.A.*, vol. vii., pp. 212–217.

On certain crannogs in Ulster.—*Proc. R.I.A.*, vol. vii., pp. 153–158.

366 **Shirley, E. P.:**

Crannogs and remains discovered in them.—*Archæological Journal*, vol. iii., pp. 44–49.

Territory and Dominion of Farney.—London.

367 **Stanley, Thomas:**

Crannog in Lough Annagh.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 156, 157.

368 **Stubbs, Major General F. W.:**

Antiquities of Dromiskin, Co. Louth.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 271–276.

369 **Traill, Anthony, LL.D.:**

On two crannog sites (Innis-a-lochen and Ballylough).—*Journal R.H.A.A.I.*, vol. vii., 4th series, p. 168.

370 **Trench, H. B.:**

Crannog in Lough Nahinch.—*Proc. R.I.A.*, vol. ix., pp. 176–179.

371 **Talbot, Hon. James:**

Antiquities found at Lagore, Ireland.—*Archaeological Journal*, vol. vi., pp. 101–108.

372 **Ussher, R. J.:**

Submarine Crannog discovered on the peat under high-water mark at Ardmore Bay.—*Journal R.H.A.A.I.*, vol. v., 4th series, p. 154; also, *Proc. R.I.A.*, vol. ii., 2nd series, p. 61.

373 **Wakefield, Edward:**

Account of Ireland, vol. i., p. 94.

374 **Wakeman, W. F.:**

Antiquities discovered in the crannog of Cornagall, Co. Cavan.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 461–465.

Crannog at Ballydoolough, Co. Fermanagh.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 360–371.

Crannogs in Drumgay Lake, near Enniskillen.—*Journal R.H.A.A.I.*, vol i., 4th series, pp. 232–235, 305–314.

Crannogs in Lough Eyes, Co. Fermanagh.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 553–564.

Crannogs of Drumdarragh, otherwise Trillick and Lankill, Co. Fermanagh.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 372–389.

Discoveries of ancient crannog structures, chiefly in the Co. Fermanagh.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 324–339.

Irish antiquities.—*Collectanea Antiqua*, vol. iii., pp. 37–44.

Observations on the principal crannogs of Fermanagh.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 305–324.

Remarks on Irish Crannogs.—*Proc. Belfast Nat. Field Club*, new series, vol. i., pp. 47–49.

Trouvaille from the crannog of Lisnacroghera, near Broughshane, Co. Antrim.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 375–408.

Second notice.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 96–106.

Third notice.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 542–545.

Fourth notice.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 673–675.

375 **Wilde, Sir William R., M.R.I.A.:**

Account of three crannogs.—*Proc. R.I.A.*, vol. vii., pp. 147–153.

'Catalogue' Antiquities Museum R. I. A., pp. 220–237.

Animal remains and antiquities found at Dunshaughlin.—*Proc. R.I.A.*, vol. i., pp. 420–426.

Crannog in the Co. Cavan.—*Proc. R.I.A.*, vol. viii., pp. 274–278.

376 **Wilson, Miss:**

Crannog of Ballylough.—*Belfast Nat. Field Club*, 1867, pp. 24–26.

377 **Wood-Martin, Col. W. G., M.R.I.A.:**

Crannog site, Co. Meath.—*Proc. R.I.A.*, vol. ii., 2nd series, Pol Lit. and Ant., pp. 480–484.

Notes on Crannogs in Longford.—*Journal R.H.A.A.I.*, vol. vii., 4th series, p. 410.

Lacustrine settlement in Moynagh Lake, Nobber, Co. Meath.—(Read at Meeting, R. I. A., Nov. 12, 1888.)

The Lake Dwellings of Ireland.—Dublin, pp. 268.

Various references to Crannogs.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 665–667.

378 **Wylie, William Michael, M.A., F.S.A.:**

Lake Dwellings of the early period.—*Archaeologia*, vol. xxxviii., pp. 177–187.

XIX.—*OGHAM.*—(CHAP. II.)

379 **Allen, J. Romilly, F.S.A. (Scot.):**

Ogham inscribed stones.—*Journal R.S.A. Ireland*, vol. ii., 5th series, pp. 165–170, 255–267, 276.

380 **Anonymous:**

Dunloe ogham cave, Dingle.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 612, 615

Ogham Stones.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 8, 9.

The Ogham Rosetta Stone.—*Archaeologia Cambrensis*, vol. vi., 3rd series, pp. 128–136.

381 **Ardfert, The Ven. Archdeacon of:**

Ogham monument, Co. Kerry.—*Proc. R.I.A.*, vol. vii., pp. 100–106.

382 **Armagh, Very Rev. the Dean of:**

Ogham Stone preserved at the Public Library, Armagh.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 367–370.

383 **Atkinson, George Mouncey:**

Ancient Irish Treatise on ogham writing, illustrated by tracings from the original MS.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 202–236.

Ogham cave at Dunloe, Co. Kerry.—*Journal Kil. A. Society*, vol. v., new series, pp. 523–524.

Ogham Stones at Lisgenan and Glenawillen.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 307–310.

384 **Barry, Rev. Edmond:**

Fifteen ogham inscriptions at Ballyknock, Co. Cork.—*Proc. R.S.A. Ireland*, vol i., 5th series, pp. 514–535.

385 **Blackett, W. R.:**

Ogham inscription.—*Journal Kil. A. Society*, vol. iii., new series, pp. 7–9.

386 **Brash, Richard Rolt, M.R.I.A.:**

Ogham chamber at Dunloghan, Co. Waterford.—Observations by the Right Rev. CHARLES GRAVES, D.D., Lord Bishop of Limerick,—*Proc. R.I.A.*, vol. x., pp. 103–121.

Ogham inscribed stones at Ballycrovane, Co. Cork.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 196–200.

Ogham inscribed stones at Camp, or Glenfais.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 320–322.

Ogham inscribed stone at Dunhel.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 238–246.
Ogham inscribed stones at Glen Fais, Co. Kerry.—*Proc. R.I.A.*, vol. x., pp. 384–395.
Ogham inscribed stones at Gowran, Co. Kilkenny.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 437–444.
Ogham inscribed stone at Kilhonane, Co. Kerry.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 27–29.
Ogham inscribed pillar-stone at Kilcullen, Co. Cork.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 304–316.
Ogham inscribed stones at Killeen Cormac.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 165–182.
Ogham inscribed stone at Kiltera, Co. Waterford.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol i., pp. 4–7.
Ogham inscribed pillar-stone at Monataggart, Co. Cork.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 172–175.
Ogham inscribed stone at Seskinan, Co. Waterford.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 118–130.
Ogham inscribed stones at Tinahally, Co. Kerry.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 186–191.
Ogham inscribed stones, Co. Cork.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 254–264.
Ogham readings.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 168–186, 438, 439.
Review of a work by, entitled 'The ogham inscribed Monuments of the Gaedhil,' &c.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 450–452.
The ogham inscribed monuments of the Gaedhil.— London, 1879.

387 **Brown, J.:**

Ogham inscribed bone pins and Stone amulets.—*Journal R.H.A.A.I.*, vol. iv., 4th series, p. 11.

388 **Caulfield, Richard:**

Ogham inscription in a souterrain in Co. Cork.—*Proc. R.I.A.*, vol. iv., pp. 387, 388.

389 **Elcock, Charles:**

Ogham stone.—Co. Cavan.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 503, 504.

390 **Elliott, Rev. John:**

Stone bearing inscribed scorings.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 370, 371.

391 **Ferguson, Sir Samuel, LL.D.:**

Difficulties attendant on the transcription of ogham legends and the means of removing them.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 30–64.
Ogham inscribed stone, Mount Music, Co. Cork.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 192–195.
Ogham inscribed stone on Callan Mountain, Co. Clare.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 160–171.
Ogham inscriptions at Breastagh, Co. Mayo, at Monataggart, Co. Cork, and at Mullagh, Co. Cavan.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 201–214, 289–297, 303, 351–353.
Fasciculus of prints from Photographs of casts of ogham inscriptions.—*Trans. R.I.A.*, vol. xxvii. pp. 47–56.
Ogham inscriptions in the Cave of Rathcroghan, Co. Roscommon.—*Proc. R.I.A.*, vol. ix., pp. 160–170.
Ogham Inscriptions in Ireland, Wales, and Scotland.—Edinburgh, 1887.
The Ogham monuments of Kilkenny, &c.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 222–238.

392 **Fitzgerald, Edward:**

Jotting in Archaeology.—*Journal Kil. A. Society*, vol. i., new series, pp. 40–49.

Ogham inscription, St. Declan's Oratory, Ardmore.—*Trans. Kil. A. Society*, vol. iii., pp. 227, 282–284.

Ogham monument at Ardmore.—*Journal Kil. A. Society*, vol. i., new series, pp. 152, 153.

Supposed ogham inscription.—*Journal Kil. A. Society*, vol. ii., new series, pp. 286–287.

393 **Geoghegan, A. G.:**

Ogham stone.—*Journal Kil. A. Society*, vol. v., new series, p. 122.

394 **Graves, Rev. Charles, D.D., Lord Bishop of Limerick:**

Crosses on stones, along with ogham inscriptions.—*Proc. R.I.A.*, vol. v., p. 234.

Notes on the ogham character on the margin of an ancient MS. of Priscian.—*Proc. R.I.A.*, vol. vi., pp. 199, 209–216.

Ogham character and alphabet, Part II.—*Proc. R.I.A.*, vol. iv., pp. 356–369.

Ogham inscription.—*Trans. R.I.A.*, vol. xxvii., pp. 31–40, 45.

On a general Method of deciphering Secret alphabetic writings, as applicable to the Irish Ogham.—*Proc. R.I.A.*, vol. iv., pp. 70–73.

On a silver Brooch with an inscription in the Ogham character.—*Proc. R.I.A.*, vol. iv., pp. 183, 184.

On ogham monuments.—*Proc. R.I.A.*, vol. v., pp. 401–403.

On the age of Ogham writing.—*Trans. Kil. A. Society*, vol. i., pp. 305–307, 312–317.

On the Ogham character.—*Proc. R.I.A.*, vol. iv., pp. 173–180.

Proper names occurring in ogham inscriptions, in the cave of Dunloe.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 665–672.

Note on Oghams.—*Journal R.H.A.A.I.*, vol vi., 4th series, pp. 439, 440.

Ogham inscription at Cahirciveen.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol i., pp. 157–159.

Ogham inscription supposed to bear an Anglo-Saxon name.—*Trans. R.I.A.*, vol. xxx., pp. 97–108.

Ogham monument found in Co. Kerry.—*Proc. R.I.A.*, vol. iii., 3rd series, pp. 374–379.

Ogham Monument at Kilcolman.—*Trans. R.I.A.*, vol. xxix., pp. 33–42.

On ogham Inscriptions.—*Hermathena*, vol. vi., pp. 241–268.

On the ogham Beithluisnin, with a note on Scythian Letters.—*Hermathena*, vol. iii., pp. 208–252.

On an Ogham Inscription lately discovered near Gortalea, Co. Kerry.—*Journal R.S.A.I.*, vol. v., 5th series, pp. 1–4.

The ogham alphabet.—*Hermathena*, vol. ii., pp. 443–472.

395 **Graves, Rev. James:**

Ogham cave at Dunloe.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 312–313.

On an ogham inscription in the Co. Kilkenny.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 432–434.

On stone and bone antiquities, with oghamic inscriptions.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 196–202

On the supposed Pilasgian inscription on Tory Hill.—*Trans. Kil. A. Society*, vol. i., pp. 300–304.

396 **Haigh, Rev. D. H.:**
Comparison of the earliest inscribed Monuments of Britain and Ireland.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 424–456.

397 **Hayman, Rev. Samuel M.A.:**
Ogham Stone, Youghal.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 38–40.

398 **Hitchcock, Richard:**
Discovery of some ogham stones.—*Proc. R.I.A.*, vol. iv., pp. 271, 272.
Ogham inscription.—*Proc. R.I.A.*, vol. vi., pp. 439–441.
Ogham inscriptions.—*Ulster Journal of Archaeology*, vol. i., pp. 101–105.

399 **Lane Fox, Col. Augustus:**
Roovesmore Fort, and stones inscribed with oghams, Aglish, Co. Cork.—*Archaeological Journal*, vol. xxiv., pp. 123–139.

400 **Langrishe, R.:**
Fragment of an ogham stone.—*Journal R.H.A.A.I.*, vol. iii., 4th series, p. 482; vol. iv., 4th series, p. 175.

401 **Lett, H. W., M.A.:**
Discovery of an Ogham stone in the North of Ireland.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 163–165.

402 **Milligan, Seaton F., M.R.I.A.:**
Ogham inscription, Co. Tyrone.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1887–8, p. 64.

403 **Nash, D. W., F.L.S.:**
Irish ogham inscriptions.—*Ulster Journal of Archaeology*, vol. ii., pp. 60–66.

404 **Nevins, Hugh N.:**
Ogham Stone, Co. Wexford.—*Trans. Kil. A. Society*, vol. iii., p. 179.

405 **O'Daly, John:**
Ogham Inscriptions and evidence of their antiquity.—*Ulster Journal of Archaeology*, vol. iii., pp. 9–13.

406 **O'Flanagan, Theophilus:**
Ancient inscription in ogham character.—*Trans. R.I.A.*, vol. i., pp. 3–16.

407 **O'Gorman, Thomas:**
Supposed ogham inscription on a ruined Cromleac at Castlederg, Co. Tyrone.—*Journal Kil. A. Society*, vol. v., new series, pp. 184, 185.

408 **Oldham, Thomas:**
On some stones with ogham characters—*Proc. R.I.A.*, vol. ii., pp. 513–517.

409 **Prim, John G. A.:**
Ogham monuments in the Rath of Dunbel, Co. Kilkenny.—*Trans. Kil. A. Society*, vol. iii., pp. 397–408.
Ogham inscription.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 281, 282.
Ogham monuments of Kilkenny, &c.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 222–238.
Ogham monument, Tullaherin, Co. Kilkenny.—*Trans. Kil. A. Society*, vol. iii., pp. 86, 87.

410 **Mac Cullagh, James, Esq., F.T.C.D.;**
Ogham Stone, Co. Wexford.—*Proc. R.I.A.*, vol. iii., p. 136.

411 **Redmond, Gabriel, M.D.;**
Ogham Stone in Salterbridge Demesne.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 418, 419.

412 **Rhys, John, M.A.:**
Irish ogham inscriptions.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 298–302.
Query as to Killarney Oghams.—*Journal R.H.A.A.I.*, vol. vi., 4th series pp. 314, 315.

413 **Shearman, Rev. John Francis:**
Bilingual ogham inscription at Killeen-Cormac.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 544–561.
Inscribed Stones at Killeen-Cormac, near Dunlavin.—*Proc. R.I.A.*, vol. ix., pp. 253–260.

414 **Todd, Rev. James Henthorne, D.D.:**
On an ogham inscription.—*Proc. R.I.A.*, vol. ii., pp. 410, 411.

415 **Tuomey, J. C.:**
Ogham monument, Castletimon, Co. Wicklow.—*Trans. Kil. A. Society*, vol. iii., pp. 187–194.

416 **Vallancey, Col. Charles:**
Observations on the alphabet of the Pagan Irish.—*Archaeologia*, vol. vii., pp. 276–285.

417 **Wakeman, W. F.:**
Ogham Pillar-stone at Aughascribbagh, Co. Tyrone.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 750–756.
On an ogham from the carn on Topped mountain, Co. Fermanagh.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 529–542; vol. iv., 4th series, p. 10.

418 **Williams, William:**
Ogham chamber at Drumloghan, Co. Waterford.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 35–39.
Ogham readings, &c.—*Journal Kil. A. Society*, vol. i., new series, pp. 324–340.

419 **Windele, John:**
Irish ogham inscriptions.—*Ulster Journal of Archaeology*, vol. i., pp. 43–52.
On ogham inscriptions.—*Trans. Kil. A. Society*, vol. i., pp. 142, 143.
On the age of ogham writing.—*Trans. Kil. A. Society*, vol. i., pp. 307–311, 317–322.

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420 **Anonymous:**
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421 **Cody, Patrick:**
Pillar-stones.—*Trans. Kil. A. Society*, vol. i., pp. 385–389.

422 **Conwell, Eugene A.:**
The Lia Fail on Tara Hill.—*Proc. R.I.A.*, vol. ix., pp. 539, 540.

423 **Hitchcock, Richard:**

Original purpose for which gallauns were erected.—*Trans. Kil. A. Society*, vol. iii., pp. 280–282.

424 **Kinahan, G. H., M.R.I.A.:**

On Standing-stones in the Co. Wexford.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 39–41.

425 **Mac Ritchie, David, F.S.A. (Scot.):**

Holed-stones.—*Journal R.S.A.I.*, vol. ii., 5th series, pp. 294–297.

426 **Wakeman, W. F.:**

Markings on pillar-stones, &c.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 445–474.

427 **Wood-Martin, Col. W. G., M.R.I.A.:**

Holed-stone in the Co. Carlow.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 471, 472.

Holed-stones.—*Rude Stone Monuments*, pp. 94–108.

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428 **Anonymous:**

Ancient hand-mill or quern.—*Dublin Penny Journal*, vol. iv., pp. 295, 296.

429 **Fitzgerald, E.:**

Primitive hand-mill found near Youghal.—*Journal Kil. A. Society*, vol. i., new series, pp. 36, 37.

430 **Smith, J. Huband:**

On the querns used by the Irish.—*Proc. R.I.A.*, vol. i., pp. 390–393.

431 **Tenison, Thomas J.:**

On the quern.—*Journal Kil. A. Society*, vol. ii., new series, pp. 352–354.

432 **Wilde, Sir W. R., M.R.I.A.:**

Cat. Mus. M.R.I.A., pp. 103–115.

433 **Wood-Martin, Col. W. G., M.R.I.A.:**

LAKE DWELLINGS OF IRELAND, pp. 85–90.

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434 **Anonymous:**

Irish and Danish Raths.—*Dublin Penny Journal*, vol. iii., p. 182.

435 **Bigger, Francis Joseph, M.R.I.A.:**

Prehistoric Raths in the vicinity of Belfast.—*Belfast Nat. Field Club*, vol. iv., 2nd series, pp. 71–82.

436 **Brownrigg, John:**

The Fort of Ardnorcher, or Horseleap, near Kilbeggan, Co. Westmeath.—*Trans. R.I.A.*, vol. ii., pp. 43–50.

437 **Byrne, Daniel:**

The Dun of Cloch-an-Phuca and Los-an-chorain.—*Trans. Kil. A. Society*, vol. i., pp. 298–300.

438 **Dickson, John M.:**

Relative antiquity of Rath, Cromleac and Tumulus.—*Belfast Nat. Field Club*, vol. iv., 2nd series, pp. 55–70.

439 **Graves, Rev. James:**

Rath at Glenfoyle.—*Trans. Kil. A. Society*, vol. i., pp. 246, 247.

Report on the souterrain of a rath.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 207, 208.

440 **Healy, Rev. W.:**

The Rath of Borrismore.—*Proc. R.S.A.I.*, vol. i., 5th series, p. 490.

441 **Hitchcock, Richard:**

On bones found in the souterrain of a rath.—*Trans. Kil. A. Society*, vol. iii., pp. 175–178.

442 **Martin, James, M.D.:**

On a liss at Portnascully.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 87, 88.

443 **Milligan, S. F., M.R.I.A.:**

The Forts of Erin from the Firbolg to the Norman.—*Proc. Belfast Nat. Hist. & Phil. Society*, 1887–8, pp. 54–60.

444 **Molyneux, Thomas, M.D., &c.:**

A Discourse concerning the Danish Mounts, Forts, and Towers of Ireland. Dublin, 1725.

445 **Moore, Capt. A. Montgomery:**

On some explorations on the Curragh of Kildare.—*Journal Kil. A. Society*, vol ii., new series, pp. 443, 444.

446 **Moore, Rev. Philip:**

Observations on raths.—*Trans. Kil. A. Society*, vol. i., pp. 22–26.

447 **O'Donoghue, Rev. Denis:**

Note on Barrow n-Eanach.—*Journal R.H.A.A.I.*, vol. vi.. 4th series, pp. 315, 316.

448 **Petrie, George, R.H.A.:**

On the Antiquities of Tara Hill.—*Proc. R.I.A.*, vol. i., pp. 68–71, 75, 76.

On the History and Antiquities of Tara Hill.—*Trans. R.I.A.*, vol. xviii., pp. 25–232.

449 **Prim, John G. A.:**

Rath at Dunbel, Co. Kilkenny.—*Trans. Kil. A. Society*, vol. ii., pp. 119–127.

Antiquities discovered in trenching a small rath.—*Journal Kil. A. Society*, vol. iii., new series, pp. 307, 308.

450 **Ross, Charles, M.D.:**

Double ditched quadrangular fort.—*Journal Kil A. Society*, vol. vi new series, pp. 3, 4.

451 **Ussher, R. J.:**

Objects found in the Kitchen Middens of Raths.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 362–368.

452 **Wright, Thomas:**

Louthiana; or, an Introduction to the Antiquities of Ireland.—London, 1758.

453 **Writers (Various):**

On the fort of Tullaghhog.—*Ulster Journal of Archaeology*, vol. v., pp. 235–242.

XXIII.—*RELIGION AND FOLKLORE.*—(CHAP. V.)

454 **Anonymous:**

Fairy Annals of Ulster.—*Ulster Journal of Archaeology*, vol. vii., pp. 131–143.

Fairy superstition.—*Ulster Journal of Archaeology*, vol. vii., pp. 73, 74.

Healing Well.—*Proc. Belfast Nat. Field Club*, vol. i., new series, p. 401.

On cities buried beneath the waters of lakes.—*Ulster Journal of Archaeology*, vol. vii., p. 348.

Some Irish Legends.—*Ulster Journal of Archaeology*, vol. viii., p. 70.

Cannibalism in Ireland.—*Ulster Journal of Archaeology*, vol. ix., p. 71.

Funeral Customs.—*Journal R.S.A.I.*, vol. v., 5th series, pp. 86, 87.

455 **Banon, Bernard:**

'Need Fire.'—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 64, 65.

456 **Beauford, William, A.B.:**

Caoinan; or, the ancient Irish lamentation.—*Trans. R.I.A.*, vol. iv., pp. 41–54.

457 **Bigger, F. J.:**

Local Folklore.—*Belfast Nat. Field Club*, vol. iii., 2nd series, pp. 545–548.

458 **Blair, Mrs.:**

Items of Folklore.—*Belfast Nat. Field Club*, vol. iii., 2nd series, pp. 583–586.

459 **Brenan, Rev. Samuel Arthur:**

Folklore.—*Journal R.H.A.A.I.*, vol. ix., 4th series, pp. 59–63.

460 **Byrne, D.:**

Folklore.—*Trans. Kil. A. Society*, vol. i., pp. 149–154.

461 **Cody, Patrick:**

Folklore.—*Trans. Kil. A. Society*, vol. ii., pp. 97–102.

461A **Colgan, Nathaniel E.:**

Witchcraft in the Arran Islands.—*Journal R.S.A.I.*, vol. v., 5th series, p. 84.

462 **Crowe, J. O'Beirne, A.B.:**

Religious Beliefs of the Pagan Irish.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 307–334.

463 **Dunne, John:**

Fenian Traditions of Sliabh-na-m-Ban.—*Trans. Kil. A. Society*, vol. i., pp. 333-362.

464 **Editor Ulster Journal of Archæology:**

The Shamrock.—*Ulster Journal of Archæology*, vol. v., pp. 12-20.

465 **Feltus, B. B.:**

Similarity between Irish and Eastern Customs.—*Journal Kil. A. Society*, vol. v., new series, p. 58.

466 **Ferguson, Samuel, LL.D., &c.:**

Evidences bearing on Sun-worship.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 265-272, 315-322.

The ceremonial Turn called 'Desiul.'—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 355-364.

467 **Fitzgerald, E.:**

Jottings in Archaeology.—*Journal Kil. A. Society*, vol. i., new series, pp. 40-49.

468 **Flaherty, John T., B.A.:**

Religion of the Celtic Nations, &c., &c.—*Trans. R.I.A.*, vol. xiv., pp. 79-139.

469 **Frazer, W., F.R.C.S.I.:**

The Shamrock.—*Journal R.S.A.I.*, vol. iv., 5th series, pp. 132-135.

470 **Gray, William, M.R.I.A.:**

Holy wells.—*Proc. Belfast Nat. Field Club*, vol. iv., series ii., pp. 86-95.

471 **Hackett, William:**

Folk-Lore, Bovine Legends.—*Trans. Kil. A. Society*, vol. ii., pp. 311-319.

Folk-Lore, Porcine Legends.—*Trans. Kil. A. Society*, vol. ii., pp. 303-310.

472 **Hennessy, W. M.:**

The Goddess of war of the Ancient Irish.—*Proc. R.I.A.*, vol. x., pp. 421-440.

473 **Kennedy, Patrick:**

Legend of Mount Leinster.—*Trans. Kil. A. Society*, vol. iii., pp. 415-417.

474 **Milligan, Seaton F.:**

Witchcraft in the Co. Tyrone.—*Proc. R.S.A.I.*, vol. i., 5th series, pp. 406, 407.

475 **Mollan, L.:**

Pishogues from Tipperary.—*Belfast Nat. Field Club*, vol. iii., series ii., pp. 571-573.

476 **Nolan, Joseph, F.R.C.S.I.:**

Notes on the well called Toberkeelagh.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 348-350.

477 **O'Byrne, Daniel:**

Folklore of the midland Counties of Ireland.—*Journal Kil. A. Society*, vol. ii., new series, pp. 105-109.

478 **O'Donovan, John, LL.D.:**

Elegy on the death of the Rev. Edmond Kavanagh.—*Journal Kil. A. Society*, vol. i., new series, pp. 118–143.

Traditions of Kilkenny.—*Trans. Kil. A. Society*, vol. i., pp. 362-372.

479 **O'Kearney, Nicholas:**

Folklore.—*Trans. Kil. A. Society*, vol. ii., pp. 32–39.

Mayday and Midsummer.—*Trans. Kil. A. Society*, vol. i., pp. 373–382.

On Folklore.—*Trans. Kil. A. Society*, vol. i., pp. 145–148.

480 **O'Keefe, C. M.:**

Persecution of the Wren.—*Ulster Journal of Archaeology*, vol. iv., pp. 98, 171, 172.

481 **O'Laverty, James:**

Correspondence of Irish, Greek, and Oriental Legends.—*Ulster Journal of Archaeology*, vol. vii., pp. 334–346.

482 **O'Laverty, Rev. James, M.R.I.A.:**

The Wren Boys.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 240–242.

483 **Patterson, W. H.:**

Holywell.—*Journal R.H.A.A.I.*, vol. i., 4th series, p. 477.

Irish Fairies.—*Belfast Nat. Field Club*, series ii., vol. iii., pp. 573–583.

484 **Petrie, George:**

Well, Co. Clare.—*Irish Penny Journal*. vol. i., pp. 401, 402.

485 **Salmon, John, M.R.S.A. Ireland:**

Druidical sacrifices in Ireland: were there human victims?—*Ulster Journal of Archaeology* (New Series), vol. i., pp. 218–226.

486 **Wakeman, W. F.:**

Wells in the N. W. of Ireland.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 365–384.

487 **Windele, John:**

Medical superstitions.—*Journal Kil. A. Society*, vol. v., new series, pp. 306–326.

488 **Westropp, J. J.:**

Folklore in Limerick and Clare.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 491, 492.

489 **Wilde, Lady:**

Ancient cures, charms, and usages of Ireland.—Ward and Downey: London.

XXIV.—*ROCK SCULPTURINGS AND ORNAMENTATION.*—(CHAPS. II., XII., AND XIII.)

490 **Brash, Richard R., M.R.I.A.:**

Inscribed cromleacs.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 101–103.

491 **Coffey, George, B.A., M.R.I.A.:**

Inscribed Stones at New Grange, &c.—*Trans. R.I.A.*, vol. xxx., pp. 1–66.

The Origin of Prehistoric Ornament in Ireland.—*Journal R.S.A. Ireland*, vol. iv., 5th series, pp. 349–379.

The Origin of Prehistoric Ornament in Ireland (second notice).—*Journal R.S.A.I.*, vol. v., 5th series, pp. 10–29.

492 **Conwell, Eugene A.:**

Inscribed cromleac.—*Proc. R.I.A.*, vol. ix., pp. 541–545.

493 **Day, Robert, jun., F.S.A.:**

Rock Carvings in Co. Cork.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 91, 92.

494 **Deane, T. N.:**

Some ancient monuments, &c.—*Proc. R.I.A.* (3rd series), vol. i., pp. 161–165.

495 **Du Noyer, George V., M.R.I.A.:**

Carved Rock at Ryefield, Co. Cavan.—*Journal Kil. A. Society*, vol. v., new series, pp. 379–385.

Remarks on a Kistvaen and on some carvings on an 'earth fast' rock in the Co. Louth.—*Journal Kil.A. Society*, vol. v., new series, pp. 497–501.

496 **Ferguson, Samuel, LL.D.:**

Inscribed cromleacs.—*Journal R.H.A.A.I.*, vol. ii., 4th series, pp. 523–531.

497 **Frazer, W., F.R.C.S.I.:**

On a series of coloured drawings of Scribed Stones in the Loughcrew Cairns, by the late G. V. Du Noyer.—*Proc. R.I.A.* (3rd series), vol. i., pp. 451–453.

Notes on incised sculpturings on Stones in the cairns of Sliabh-na-Calliaghe, near Loughcrew, Co. Meath, Ireland, with illustrations from a series of Ground Plans and water colour Sketches, by the late G. V. Du Noyer, of the Geological Survey of Ireland.—*Proceedings of the Society of Antiquaries of Scotland*, 1894: pp. 294–340.

On Cup-Markings in Megalithic Monuments due to *Echinus Lividus*. *Journal R.S.A.I.*, vol. v., 5th series, pp. 64–71.

498 **Graves, Rev. Charles:**

On a rubbing of an inscription at Lennan, Co. Monaghan.—*Proc. R.I.A.*, vol. iv., pp. 368, 309.

499 **Graves, Very Rev. Charles, D.D.:**

Inscribed monuments in the Co. Kerry.—*Proc. R.I.A.*, vol. ix., pp. 179–181.

500 **Graves, Rev. James, A.B.:**

Boulder with Carvings at Clonfinlough, Kings' County.—*Journal Kil. A. Society*, vol. v., new series, pp. 354–362.

Cup and circle sculptures as occurring in Ireland.—*Journal R.H.A.A.I.*, vol iv., 4th series, pp. 283–299.

501 **Jones, Colonel:**

Scribings on a rock at Drumlish.—*Proc. R.I.A.*, vol. iii., pp. 147–149.

502 **Kinahan, G. H., M.R.I.A.:**

Cup-marked and inscribed Stones in the Counties of Wicklow and Wexford.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 222–237.

The Mevagh inscribed Stones and other antiquities.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 427–437.

503 **Milligan, Seaton F.:**

Cup-marked Cromleacs.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 526–528.

504 **Magennis, J. P.:**

Incised scorings on the sides of a natural cave, known as the 'lettered Cave,' on Knockmore Mountain, near Derrygonnely, Co. Fermanagh.—*Journal Kil. A. Society*, vol. iii., new series, p. 171; vol. iv., pp. 11, 12.

505 **Parkinson, Henry:**

Curious inscribed stone found near Cabinteely, Co. Dublin.—*Proc. R.I.A.*, vol. x., pp. 340–242.

506 **Simpson, Sir J. Y., Bt.:**

Archaic Sculpturings of Cups, Circles, &c., upon Stones and Rocks.—Edinburgh, 1862.

507 **Smith, Owen:**

Bone Comb, Kilmessan, Co. Meath.—*Journal R.S.A. Ireland*, vol. iv., 5th series, pp. 390–392.

508 **Smith, Rev. G. Sidney, D D.:**

An account of some characters found on stones on the top of Knockmanny Hill, Co. Tyrone.—*Proc. R.I.A.*, vol. ii., pp. 190, 191.

509 **Wakeman, W. F.:**

Monument exhibiting cup markings and circles with channels, from the neighbourhood of Youghal.—*Journal R.H.A.A.I.*, vol. vii., 4th series, pp. 603, 604.

On certain markings on rocks, pillar-stones, and other monuments.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 445–474.

On sepulchral scribings and rock markings, with suggestions for their classification.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 538–561.

On the Cavern called 'Gillies' Hole,' at Knockmore, Co. Fermanagh.—*Proc. R.I.A.*, vol. x., pp. 395–397.

On the Inscribed Cavern in the Parish of Boho e, Co. of Fermanagh.—*Proc. R.I.A.*, vol. x., pp. 327–329.

The cave of Knockmore, with remarks on the character of the Primitive scorings.—*Proc. R.I.A.*, vol. x., pp. 229–232.

510 **Westropp, Hodder M.:**

On rock Carvings.—*Proc. R.I.A.*, vol. x., pp. 232–234.

On the Pre-Christian Cross.—*Proc. R.I.A.*, vol. viii., pp. 322–324.

XXV.—*ROMAN COINS, &c., AND PRE-CHRISTIAN NOTICES OF IRELAND.*—(CHAP. III.)

511 **Aethicus:**
Cosmographia Aethici, Istrii, ab Hieronymo, ed. H. Wuttke.—Lipsiæ, 1854; see also *Ulster Journal of Archaeology*, vol. ii., pp. 281, 282.

512 **Beauford, William, A.B.:**
Ancient Ireland according to Ptolomy.—*Trans. R.I.A.*, vol. iii., pp. 51–77.

513 **Betham, Sir William** (and others):
Etruscan Coins supposed to have been found in Ireland.—*Proc. R.I.A.*, vol. iv., pp. 29–34, 36, 37, 74, 75.

514 **Bradley, Henry:**
Ptolomy's Geography of the British Isles.—*Archaeologia*, vol. xlviii., pp. 377-396.

515 **Carruthers, James:**
On Roman remains (*The remains appear to be of purely native manufacture*).—*Journal Kil. A. Society*, vol. i., new series, pp. 164, 165.

516 **Drummond, Rev. W. H., D.D.:**
Roman Coins.—*Proc. R.I.A.*, vol. ii., pp. 185–190.

517 **Hardiman, James, M.R.I.A:**
Maps, &c., relating to Ireland.—*Trans. R.I.A.*, vol. xiv., pp. 57, 58.

518 **Ledwick, Rev. Edward, LL.B., &c.:**
Romantic History of Ireland.—*Trans. R.I.A.*, vol. iv., pp. 21–32.

519 **Mac Cullagh, Professor:**
Roman Coins.—*Proc. R.I.A.*, vol ii., pp. 184, 185.

520 **O'Donovan, John:**
Pre-Christian notices of Ireland. — *Ulster Journal of Archaeology*, vol. viii., pp. 239–251.

521 **Orpen, Goddard H.:**
Ptolomy's Map of Ireland.—*Journal R.S.A. Ireland*, vol. iv., 5th series, pp. 115–128.

522 **Petrie, George, LL.D.:**
Ancient Coins.—*Proc. R.I.A.*, vol. v., pp. 199, 200.
Roman Coins found near Rathfarnham.—*Proc. R.I.A.*, vol. vi., pp. 441–445.

523 **Pictet, Professor Adolphe:**
Origin of the name of Ireland.—*Ulster Journal of Archaeology*, vol. v., pp. 52–60.

524 **Pinkerton, W.:**
Roman intercourse with Ireland.—*Ulster Journal of Archaeology*, vol. v., pp. 32–36.

525 **Porter, J. Scott:**
Discovery of Roman coins and other Articles near Coleraine, Co. Derry. *Ulster Journal of Archaeology*, vol. ii., pp. 182–192.

526 **Walker, Joseph Cooper, M.R.I.A.:**
Origin of romantic fabling.—*Trans. R.I.A.*, vol. x., pp. 1–19.

527 **West, William, M.D.:**
Ancient Geography of the British Isles.—*Proc. R.I.A.*, vol. i., p. 144

528 **Wood, Thomas, M.D.:**
Mixture of Fable and Fact in the early Annals.—*Trans. R.I.A.*, vol. xiii., pp. 3–80.

XXVI.—*RUDE STONE MONUMENTS, CISTS, GRAVES, AND CEMETERIES, &c.*—(CHAP. VII.)

528A **Annesley, Lord:**
Cromlech near Castlewilliam.—*Journal R.S.A.I.*, vol. v., 5th series, p. 87.

529 **Anonymous:**
Cromleac.—*Dublin Penny Journal*, vol. i., p. 245.
Cromleacs.—*Dublin Penny Journal*, vol. ii., pp. 101, 293, 301, 308, 309, 381, 382.
Druid Seat.—*Dublin Penny Journal*, vol. ii., p. 256.
Fires of Bones.—*Ulster Journal of Archaeology*, vol. vii., p. 77.
Lough Crew.—*Dublin Penny Journal*, vol. iv., p. 287.
Rocking Stone.—*Dublin Penny Journal*, vol. ii., p. 213.

530 **Atkinson, G. M.:**
On a Stone Circle.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 306, 307.

531 **Benn, George:**
Alleged discoveries in a carn.—*Journal Kil. A. Society*, vol. i., new series, pp. 107–109.

532 **Beranger, Gabriel:**
Rude Stone Monument.—*Journal R.H.A.A.I.*, vol. i., 4th series, pp. 150, 151.

533 **Brash, Richard R., M.R.I.A.:**
Inscribed Cromleacs.—*Journal R.H.A.A.I.*, vol. iii., 4th series, pp. 101–103.
Tumuli.—*Trans. Kil. A. Society*, vol. ii., pp. 272–276.

534 **Brogan, M.:**
Sepulchral monuments.—*Proc. R.I.A.*, vol. x., pp. 440–443.

535 **Brown, Dr. S. F., T.C.D., &c.:**
Vicars' Carn.—*Trans. R.I.A.*, vol. viii., pp. 3–9.

536 **Buick, Rev. George R.:**
White Stone in a Grave.—*Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 336, 337.

537 **Clark, Henry P.:**
Small sepulchral cist.—*Trans. Kil. A. Society*, vol. iii., pp. 139, 140.

538 **Cody, Patrick:**
On some cists.—*Trans. Kil. A. Society*, vol. i., pp. 385–389.

539 **Coffey, George, B.A.:**
Tumuli at New Grange, &c.—*Trans. R.I.A.*, vol. xxx., pp. 1–96.

540 **Conwell, Eugene Alfred, M.R.I.A.:**
Ancient cemetery of Lough Crew.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 72–106.
Ancient Sepulchal Carns and other remains.—*Proc. R.I.A.*, vol. ix., pp. 42–50, 355–379.
Cromleac near Rathkenny.—*Proc. R.I.A.*, vol. ix., pp. 541–545.
Tomb of Ollamh Fodhla.—London, 1873.

541 **Cooper, Colonel Edward H.:**
Megalithic remains at Carrowmore, Co. Sligo.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 155–157.

542 **Cornwall, Robert R.:**
Graves near Killucan.—*Proc. R.I.A.*, vol. iv., p. 149.

543 **Cosgrave, Rev. Constantine:**
Cromleac.—*Trans. Kil. A. Society*, vol. iii., pp. 57, 58.
Sepulchral monument.—*Journal Kil. A. Society*, vol. i., new series, p. 52.

544 **Deane, Sir T. N.:**
Ancient monuments.—*Proc. R.I.A.*, vol. i., 3rd series, pp. 161–165.
Ancient monuments in Co. Kerry.—*Proc. R.I.A.*, vol. iii., 3rd series, pp. 100–107.

545 **Dickson, John M.:**
Relative antiquity of Rath, Cromleac, and Tumulus.—*Belfast Nat. Field Club*, vol. iv., 2nd series, pp. 55–70.

546 **Dillon, Hon. L. Gerald:**
Remarkable megalithic monument.—*Journal R.H.A.A.I.*, vol. vi., 4th series, p. 19.

547 **Du Noyer, George V., M.R.I.A.:**
Cromleacs near Tramore, &c.—*Journal Kil. A. Society*, vol. v., new series, pp. 474–482.
Remarks on a certain class of Cromleacs.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 40–46.
Remarks on a Kistvaen.—*Journal Kil. A. Society*, vol. v., new series, pp. 497–501.

548 **Elcock, Charles:**
Prehistoric monuments at Carrowmore.—*Systematic Lists illustrative of the Archaeology, &c., of the North of Ireland*, vol. i., pp. 249–258.

549 **Ferguson, Samuel, LL.D.:**
Ancient Cemeteries, &c.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 114–128.
Inscribed Cromlechs.—*Journal R.H.A.A.I.*, vol. ii., 4th series. pp. 523–531.

550 **Ffrench, Rev. J. F.:**
Megalithic sepulchral chamber, Co. Wicklow.—*Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 183, 184.

551 **Finegan, Joseph:**
Cromleac in the Co. Kilkenny.—*Archaeologia*, vol. xvi., pp. 264–271.

552 **Frederick VII., King of Denmark:**

On the construction of Cromleacs.—*Ulster Journal of Archaeology*, vol. vii., pp. 314–323.

553 **Goodman, Rev. James:**

Tulachs as places of sepulture.—*Trans. Kil. A. Society*, vol. iii., pp. 185, 186.

554 **Graves, Rev. Charles:**

Cromleac.—*Proc. R.I.A.*, vol. iv., pp. 368, 369.

555 **Graves, Rev. James:**

Ancient Pagan cemetery.—*Trans. Kil. A. Society*, vol. ii., pp. 190–192.

Excavation of a carn.—*Trans. Kil. A. Society*, vol. i., pp. 289–294.

Injury to the Great-chambered tumulus at Dowth.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 13, 14, 205–206.

On Cromleacs.—*Trans. Kil. A. Society*, vol. i., pp. 129–132.

Pagan Cemetery.—*Trans. Kil. A. Society*, vol. ii., pp. 295–303.

Sepulchral Tumulus.—*Trans. Kil. A. Society*, vol. ii., p. 358.

Tumulus, &c.—*Trans. Kil. A. Society*, vol. ii., p. 358.

556 **Gray, William:**

Ancient remains, Co. Antrim.—*Belfast Nat. Field Club*, 1871, pp. 65–69.

Cromleacs in Counties of Down and Antrim.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 354–367.

Cromleacs of Antrim and Down.—*Systematic Lists illustrative of the Archaeology, &c., of the North of Ireland*, vol. i., pp. 226–248.

Discovery of an ancient sepulchre.—*Proc. R.S.A. Ireland*, vol. i., 5th series, pp. 164, 165.

557 **Hardman, Edward T.:**

Remarkable Megalithic structure near Sligo.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 57–65.

558 **Hassé, Rev. Leonard, M.R.I.A.:**

Urn burial on the site of Monasterboice.—*Journal R.S.A. Ireland*, vol. ii., 5th series, pp. 145–150.

559 **Holden, J. Sinclair, M.D.:**

Description of a tumulus and its contents.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 350–352.

Giants' Graves.—*Belfast Nat. Field Club*, 1872, pp. 44–47.

560 **Kelly, Dillon, M.R.I.A.:**

Opening of a tumulus, Co. Westmeath.—*Journal R.H.A.A.I.*, vol. iv., 4th series, pp. 177–183.

561 **Kinahan, G. H., M.R.I.A.:**

Megalithic Structures.—*Journal R.H.A.A.I.*, vol. i., 3rd series, pp. 442–445; vol. ii., 4th series, pp. 10–13, 201–205; vol. iii., pp. 374–380; vol. v., pp. 253–257; vol. vi., pp. 434–436; vol. vii., pp. 424–429; vol. ix., pp. 277–286.

562 **Lalor, M. W.:**

Discovery of Cists.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 446, 447.

563 **Lee, Alfred T.** :
Opening of a tumulus. — *Ulster Journal of Archaeology*, vol. vi., pp. 169–171, 276, 277.

564 **Lett, Rev. Henry W.** :
Megalithic Structures.—*Journal R.H.A.A.I.*, vol. v., 4th series, p. 303.
Report on ancient monuments.—*Journal R.H.A.A.I.*, vol. vi., 4th series, pp. 431–434.

565 **Lukis, Rev. W. C., F.S.A.** :
What is a Cromleac ?— *Journal Kil. A. Society*, vol. v., new series, pp. 492–497.

566 **Mac Adam, Robert** :
Opening of a Carn.—*Ulster Journal of Archaeology*, vol. iii., p. 315–320.

567 **M'Cormack, James, C.E.** :
Discovery of Graves.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 447–449.

568 **Mac Enery, J.** :
Opening of a Sepulchral mound, New Castle, Co. Wicklow. — *Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 163, 164.

569 **Mac Mahon, J. D.** :
Tulachs as places of sepulture.— *Trans. Kil. A. Society*, vol. iii., pp. 182–185.

570 **Mease, Rev. James** :
Discovery of a cist.—*Trans. Kil. A. Society*, vol. i., pp. 382–389.

571 **Milligan, Seaton F., M.R.I.A.** :
On some Cromleacs. — *Journal R.H.A.A.I.*, vol. viii., 4th series, pp. 526–528.
Sepulchral structures, &c. — *Proc. Belfast Nat. Hist. & Phil. Society*, 1888–9, p. 43.

572 **Miller, William** :
Rude Stone Monuments in Antrim.— *Proc. Belfast Nat. Field Club*, vol. i., new series, p. 351.

573 **Moore, Capt. A. Montgomery** :
On some explorations. — *Journal Kil. A. Society*, vol. ii., new series, pp. 443, 444.

574 **Moore, Rev. Phillip** :
Giants' Graves.—*Trans. Kil. A. Society*, vol. i., pp. 11–14.

575 **Newman, Lieut., R.N.** :
Tumulus near Rush, Co. Dublin.—*Proc. R.I.A.*, vol. i., pp. 247–249.

576 **O'Daly, John** :
Tulachs as places of sepulture.—*Trans. Kil. A. Society*, vol. iii., pp. 87–96.

577 **O'Donovan, W. J.** :
Kistvaen.—*Journal Kil. A. Society*, vol. ii., new series, p. 252.

578 **O'Laverty, Rev. James, M.R.I.A.** :
Pagan Monuments.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 103–108.
Pagan monuments in the immediate vicinity of ancient churches, and on peculiar forms of interments observed.—*Journal R.H.A.A.I.*, vol. v., 4th series, pp. 103–108.

579 **O'Neill, Henry:**

Rock monuments of Co. Dublin.—*Trans. Kil. A. Society*, vol. ii, pp. 40–46.

580 **Petrie, George, R.H.A., &c.:**

Coronation Chair.—*Dublin Penny Journal*, vol. i., p. 208.
New Grange, Co. Meath.—*Dublin Penny Journal*, vol. i., pp. 305, 306.
Stone circles, carns, &c., Carrowmore.—*Proc. R.I.A.*, pp. 140–142.
Tomb in the Phœnix Park.—*Proc. R.I.A.*, vol. i., pp. 186–193, 196.

581 **Plunkett, Thomas:**

Exploration of a Long Barrow.—*Proc. R.I.A.*, Pol. Lit. and Ant., vol. i., pp. 323–328.

582 **Pownall, Thomas:**

Sepulchral Monument at New Grange.—*Archaeologia*, vol. ii., pp. 236–271.

583 **Prim, John G. A.:**

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584 **Reade, Rev. George H.:**

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585 **Rhind, A Henry, F.S.A. (Scot.):**

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586 **Riggs, Dr. Ledlie:**

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587 **Shearman, Rev. J. F.:**

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588 **Sigerson, George, M.D.:**

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589 **Smith, J. Huband:**

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591 **Stanley, Thomas:**

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592 **Tenison, Thomas Joseph:**

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594 **Wakeman, W. F.:**

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595 **White, Rev. Patrick:**

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596 **Wilde, Sir W. R., M.R.I.A.:**

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597 **Windele, John:**

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598 **Wood-Martin, Col. W. G., M.R.I.A.:**

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Ibid.—*Dublin Penny Journal*, vol. iii., pp. 350–352.

620 **Egan, J. W.:**

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621 **Ferguson, Samuel, LL.D.:**

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622 **Foot, Charles H.:**

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624 **Graves, Rev. James:**

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625 **Gray, William, M.R.I.A.:**

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627 **Hamilton, G. A., M.P.** :

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628 **Healy, Rev. W.** :

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631 **Kinahan, George H., M.R.I.A.** :

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632 **Lanyon, J.** :

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NOTES.

Page 12, Line 13.

Wild Horse.—The eating of horseflesh is characteristic of many savage races, numerous traces of the bones of horses—the largest having been fractured, evidently for extraction of the marrow—occur amongst the remains of funeral feasts which appear to have taken place during the erection of some carns. On the introduction of Christianity into Northern Europe, the earliest ordinances of the Church were directed against the use of horseflesh, as it was by the heathen considered emblematic of their god, Odin.

Page 75, Line 31.

Roman Coins.—The coins that came under the writer's observation appear to have never been in circulation, the impressions being as distinct as on newly minted sixpences.

Page 113, Line 24.

White Stone.—Sir John Evans, in *Ancient Stone Implements of Great Britain* (pp. 419–421), draws attention to the curious custom of the deposition in graves of pebbles, often selected for their beauty or some singularity of appearance. They are sometimes perforated, and the pebble occasionally appears to have been actually placed in the hands of the deceased.

Page 129, Line 16.

Badhbh.—Badhbh is the term applied in the south of Ireland to a scolding woman, or virago. See also *Battle of Magh Leana*, p. 131. Goddess and witch have finally degenerated into a common 'scold.'

PAGE 146, LINE 33.

Tuapholl.—Also written tuathbel, *i.e.* left-handwise, in contra-distinction to desiul, or right-handwise: see *Journal R. H. A. A. I.*, vol. iii., 4th series, p. 37*n*.

PAGE 147, LINE 2.

Desiul.—In *The Vision of MacConglinne* (p. 10) the hero, when parting from his tutor, went right-handwise round the cemetery (*Dolliud desel relce*).

PAGE 161, LINE 7.

Garland Sunday.—Lammas Sunday, in Irish *Domnach Crom Dubh*—Anglicized Garland Sunday—was, in its origin, apparently a Pagan festival, in honour of the earth, now about to bring forth its offspring. The farmer fed his family on first-fruits. No potatoes were dug before it, and flowers were shown on the altars. In the *Book of Lismore* the word Cṁoʒam is explained as *Lughasa*, Anglicized Lammas, the designation of the first day of August. On the summit of an eminence now called the Hill of Ward, county Meath, the Druids lighted their sacred fires on the eve of Samhain, the Pagan festival at the end of harvest, in thanksgiving for the ingathering of the fruits of mother earth. This festival is now known as Hallow Eve, and the eating of apples and nuts on that occasion is probably a survival of the ceremonies of this Pagan festival.

PAGE 168, LINE 26.

Sreod.—Sreod is stated, in *Historia Britonum* of Nennius, to signify sneezing. As an omen enumerated in conjunction with other omens, this translation of the word seems to be a very likely solution of the enigma. The superstition regarding sneezing is of almost world-wide distribution.

PAGE 175, LINE 18.

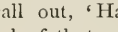
Distich.—The first, second, and third lines of this distich consist of an enumeration of a series of Pagan omens, observations on the movements of the scald-crow (or the Badb), of the raven, reliance to be placed on female deities, or the rising or setting of the sun,

declared to be of no utility and vain, as compared with the acme of Christian and Mahometan teaching—there is no one to be relied on but God alone.

PAGE 214, LINE 18.

Water-Demon.—Carlyle, in his *Lecture on Heroes*, states that, on the river Trent, in England, the Nottingham bargemen, when the river is in flood characterized by a backwardor eddying swirl, style it 'Eager.' They call out, 'Have a care; there is the Eager coming.' The survival of that word is curious, for the primitive Nottingham canoeist believed in the god *Aigir*.

PAGE 223, LINE 20.

Lake-Dwelling.—'Wednesday, July 3rd, 1833. Went to a countryman in the immediate neighbourhood of Frenchford, where I got a good celt, found in a fort adjacent. Heard rather a curious description of the remains of an ancient house discovered the year before (*i.e.* 1832) in draining a small lake upon Mr. Cooper's property. The workmen were attracted by seeing some sticks appearing above water in regular rows, and, upon examination, they discovered that those sticks were made fast between two beams placed thus  at the bottom of the lake. A number of these sticks (which I should think must have been uprights for the side-walls of a house) were raised and carried off by the country people, and were afterwards cut up for domestic purposes, so that it was with difficulty that I was able to secure one uninjured. It is of very fine black oak, about eight or nine feet high, and rudely cut down by hatchets to about an inch in thickness. It was in the same lake that the curious oaken vessel which I had last year procured was found. My informant said the lake contained a great many of these wooden walls, and might without difficulty be drained.'—*MS. Journal R. C. Walker, Esq.*

PAGE 244, LINE 30.

Cooking-Places.—From the description of the cooking-place at Ardnahue, as given by the discoverer, it would appear to have been constructed on the principle of open-air cooking-places of the 'Broad-Arrow' type, which are still used in modern military encampments

Page 249, Line 27.

Chariots.—Caesar appears to have been greatly impressed with the courage and dash displayed by the British charioteers. He describes them as commencing the combat by furiously driving close and parallel to the Roman line of battle, hurling weapons during their whirlwind career, and frequently disordering the ranks by the fear inspired by the rush of the horses and the rattle of the chariots. They would dash into the troops of cavalry, leap off the chariots, and fight on foot, whilst the drivers would edge the chariots out of the press of battle, and form up in regular order, so that if the fighting men were worsted they might have a ready means of transport back to their own lines. Caesar minutely describes their great expertness in management of their horses, and concludes by stating that they possessed all the mobility of cavalry with the solidity of infantry.

Page 254, Line 13.

Single-piece Canoes.—'Saturday, October, 1833. Walked from Jamestown to Ballydoola, about three miles in the direction of Enniskillen. where I heard two ancient boats had been discovered in a lake in the neighbourhood. I soon saw the person who had found them, who told me that during some very dry weather last summer the lake of Ballydoola dried so much as to show a little island nearly in its centre, having a good deal of bog timber upon it. Into this island my informant, with several other persons, went, for the purpose of getting some of the timber, when they found a great quantity of oak boards formed with hatchets, a curious ancient knife, since mislaid, and two boats—one, by far the most curious, fell in pieces shortly after it was found. It was upwards of fourteen feet long, sharp at both ends, and could contain eight or ten people. The other still remains, having been given to a neighbour, in whose stable it is used as a manger. Its length is upwards of seven feet, and its circumference more than four feet eight inches, and it, as well as the other boat, was scooped out of a single tree of oak.'—*MS. Journal, R. C. Walker, Esq.*

PAGE 255, LINE 33.

Curragh.—The late R. C. Walker, in a MS. diary of the year 1835, thus describes the boats of the Arran Islanders, which were then 'without a single exception curraghs, their wicker-work being covered with canvas oiled and tarred, and not with horse-skin, as were those which I had seen before in the county of Donegal. These boats used to be covered with skins till within a very late period, as I was told, but canvas is now exclusively used, I suppose in consequence of its cheapness. I observed another difference between the Donegal and Arran curraghs, the former being propelled by a single person with but one oar, or rather paddle, which he works in a kneeling position from the bow of the curragh, whilst the Arran boats are rowed by two persons, each having two paddles. The anchor is a large piece of rough lime-stone, enclosed in a very curious framework of wood, and the cable composed of horse-hair; but rude as these equipments were, they seemed to answer the purpose of the poor fishermen very well, as I observed them all pulling in fish in great numbers.'

PAGE 296, LINE 2.

Tumulus.—Saturday, 6th July, 1833, the late R. C. Walker opened a tumulus at the foot of the carn on the top of Knocknarea. 'Found a large quantity of half-burned bones of men and animals, and amongst them small round beads without any hole in them. The formation of this tumulus was precisely similar to those which I opened last summer. The flagstones at the bottom of the grave were from the quarry at Scarden. Opened another tumulus in the same neighbourhood, which, to judge from appearance, was much more promising than any I had as yet attacked, but after a diligent search I found that it had unquestionably been previously ransacked, a circumstance which has, I own, made me uneasy, lest my labours in other places should, for the same reason, be fruitless.'—*MS. Journal, R. C. Walker, Esq.*

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